

City of Monterey Park
California

Bruggemeyer Memorial Library
Expansion and Renovation

LIBRARY BUILDING PROGRAM

(Section 20440: Appendix 5)

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**MONTEREY PARK
BRUGGEMEYER MEMORIAL LIBRARY
EXPANSION AND RENOVATION
LIBRARY BUILDING PROGRAM**

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BRUGGEMEYER MEMORIAL LIBRARY EXPANSION AND RENOVATION

BUILDING PROGRAM

Section 2. Overview and Introduction

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2. OVERVIEW AND INTRODUCTION

The city of Monterey Park has the opportunity to provide the environment that will allow it to fulfill the library service needs of its residents. This library building program is a vital step along the way to providing a modern, more adequately spaced, and more functional library facility that will serve the needs of Monterey Park's residents well into the 21st century. This building program takes the community's vision of its library as identified and clarified in the needs assessment and plan of service and translates the vision into a definition of spaces and building requirements that are needed to transform the existing library into that vision.

This report is a predesign and preconstruction analysis and planning document in support of the expansion and renovation of the Bruggemeyer Memorial Library. Its primary intent is to define the detailed functional space requirements and the general building requirements for the Bruggemeyer Memorial Library expansion and renovation.

2.1. Introduction, Need for the Project and Timeline

The community of Monterey Park has outgrown the existing configuration of and space in the Bruggemeyer Memorial Library. The Community Needs Assessment indicates that the community needs a considerably larger library than it currently has to meet its library service needs. The results of the needs assessment indicate a need for more seating, more technology, and more collections. It also indicates a need to provide adequate housing for the library's extensive programs and services, especially services to children, to preteens and teens, the K-12 population, to the ethnically diverse members of the community, and to family literacy. The library's Plan of Service, derived from the needs assessment, outlines the programs and services the library offers, will continue to offer, and will offer anew in the expanded and renovated library. To implement the Library's Plan of Service and fulfill the community's vision, the existing Bruggemeyer Memorial Library must double in size from its current 26,500 square feet to 53,500 square feet. This building program translates the community's service and program needs into defined spaces and building requirements that will make up the expanded and renovated library.

The timeline for the Bruggemeyer Memorial Library expansion and renovation project is as follows:

October 30, 2002	Site Acquired
January 15, 2003	Schematic Plans Completion
May 15, 2003	Design Development Plans Completion
September 15, 2003	Working Drawings (90%) Completion
October 15, 2003	Construction Documents Completion
November 15, 2003	Project Advertised for Bids
February 15, 2004	Start of Construction
August 15, 2004	Estimated Mid-Point of Construction
February 15, 2005	Completion of Construction
April 15, 2005	Opening of Library Building to the Public
June 15, 2005	Final Fiscal and Program Compliance Review Completed

2.2. The Library Building Program and the Architectural Design Process

The purpose of the library building program is twofold:

It provides the design professional with information required to design a library facility that relates to the needs of the library's service population. To the architect, the program is a requirement and specification document. It enables the design professional to interpret and transform the Library's functional and service objectives into architectural design solutions and then into spaces in the new physical setting.

It provides the building team and community with a document that expresses community and library expectations for the new library. It serves as the principal planning document for the library and is essentially a statement outlining the mission of the library and the project goals.

The program is a culmination of a variety of information and data. It serves as a guide to the architect to the facility's functional, operational and environmental requirements as well as its spatial relationships and content – all of which are direct responses to the variety of service needs of the library's community and staff. The program serves to communicate the needs not only to architects, but to the engineers and other consultants involved in the library design and building process.

2.3. The Library Building Team

The planning team for the Bruggemeyer Memorial Library Expansion and Renovation has the following members:

Client/Owner – The City of Monterey Park will continue to own and maintain the Bruggemeyer Memorial Library facility. Appropriate City staff must approve each phase of the design prior to the initiation of any further phases.

Library Building Committee – This committee, as a subcommittee of the Library Board, oversees the entire project and provides guidance and professional and technical expertise for the project. It is a subcommittee of the Library Board.

The Library Board – The Library Board is part of the Library Building Committee and makes the final decisions on the project.

The City of Monterey Park – The City of Monterey Park has final say over the cost of the building.

Architect – The project architect will design the renovated and expanded library building to meet programming requirements. Architectural plans, elevations, sections, renderings, specifications, and other elements required for the final construction of the building will be developed and prepared by the architect. Cost estimates for each stage of the project, including both hard and soft costs, will be commissioned or developed. The architect will provide all planning documents to the building team and provide administration during the construction process.

Library Building Consultant – the library building consultant, as part of the architectural design team, will work with the Library and Library Building Committee to establish the need for library services and prepare the building program to meet service needs and implement the plan of service. Once the program

is complete, the consultant advises the architect on the scope and intent of the program, participates in design development, working drawings discussions, and reviews architectural plans for adherence to the library building program. The library building consultant provides input to development of furniture and shelving specifications and reviews shop drawings and other drawings of functional areas of the library.

Engineering consultants – Civil, electrical, structural, acoustical, information technology, and mechanical engineering firms will be a part of the architect's design team to provide technical expertise in the design of the library building. These consultants serve as extended building team members.

BRUGGEMEYER MEMORIAL LIBRARY EXPANSION AND RENOVATION

BUILDING PROGRAM

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3. GENERAL BUILDING DESIGN REQUIREMENTS

This section provides information on basic building, equipment, and design requirements. The opportunity to plan and construct an expanded new public library facility generates a great deal of enthusiasm on the part of the citizens, staff, local officials, and the architects and engineers selected to design the structure. The building that they are responsible for producing, renovating, and/or expanding is a creation of space that must serve the community effectively for many years to come.

The role of the public library in the community should be the foremost design focus. The expanded library, as a community, education, and technology center serves adults and juveniles, as well as the business community, and as the community and cultural center for leisure time library activities for a diverse range of users, must therefore provide a variety of spaces to satisfy these needs and uses.

The exterior appearance and architectural appropriateness for the community is very important. The building should present a comfortable, attractive, and friendly atmosphere that invites users to enter and take advantage of the services and resources available.

The organization and design of the interior spaces is critical to the efficient operation of the library and the effective delivery of public library services. It is important that the public using this facility is provided with a logical, functional layout of the materials collection and services so that they can gain easy access to all that is available. Good interior design of lighting, signage, and natural circulation patterns all contribute to this end. Attention to flexibility and recognition of the fact that the relocation of collection and activities within the building will be an ongoing process is of primary concern. The flexibility required must also guide planning of partitions, electrical, lighting, and communication distribution systems throughout the building. The interior design should be open with a minimum of interior walls, yet there is a strong need to establish discrete areas serving an identified purpose through the layout of space, shelving, and furniture.

3.1. Basic Design Criteria

There are a number of basic elements that a well conceived, functional, library building should include:

Highly visible, accessible location. To be well used, the library facility must be located near the center of its population, to be frequented by the greatest number of citizens. Generally this is in the central business district or commercial area. The library and its internal activities must be very visible. Since most users of the library will come by private vehicle, location on major traffic routes and accessibility from major thoroughfares is important. Access to the library requires adequate, immediately available on-site or adjacent public parking.

Open flexible floor plan. To facilitate the arrangement of the library's activities and allow for any potential future rearrangements, the library should be free of interior load bearing walls and closely spaced columns. The simplest and most functional design shape for a library is as a rectangle(s) with standard modules or clear spans to allow for flexible layouts of shelving and furniture.

The interior elements of the library will not remain fixed, but will be adjusted as services warrant. The building should be designed on the module principle. The module or bay spacing must be as large as the budget will allow and must take into consideration the standard library shelving length of three feet. Certain areas (such as the lobby, circulation, reference, entrance area, multipurpose room and classrooms)

may require free spans in excess of the regular building module selected. The bay size must recognize the requirement for ADA aisle widths and provide for efficient layout of shelving. Circular or angled (non-90 degree) partitioning may require more gross area to accommodate a functional linear interior layout and should be avoided.

Elements within the building requiring partitioning should be grouped together and have supervision access; e.g., windows. Multiple use of space should be considered in the design and arrangement of the building. Persons browsing as well as those seeking information must be considered.

The interior walls must allow for flexibility in the future use and arrangement of the building. Where columns are necessary, an effort must be made to place them in such a way as to avoid interference with traffic, visibility, or equipment and furniture arrangements. Columns will require guards on the corners to prevent damage from booktrucks.

A ground level building. It must be possible to enter at the main public level through a single entrance that is highly visible and well situated to the general activity area with convenient access to parking. In the interior space there should be no grade changes on a floor level -- no ramps, no risers, no pits.

Adequate floor space. Adequate space must be provided for the materials collection, adequate table and leisure seating and sufficient area for the staff to perform its public service function as well as behind the scenes responsibilities. Because of the growth in the use of computer hardware and software, and audio/visual material in the public library, there will be space provided to accommodate the equipment necessary for the use of these materials and the shelving and/or storage space of library materials in these formats. It is also desirable to have display space for library and/or community exhibits.

The building should allow for a reasonable rate of internal expansion, particularly in the collection shelving area so that the growing accumulation of library materials will not force an arbitrary reduction of public reading areas or staff work areas.

Logical relationship of functional areas. The building should be planned and arranged so that the functional areas of activities are properly related to one another for most intelligent use of the building by the library staff. *While the aesthetics of the building are important, the actual function of the building must be kept uppermost in mind at all times and where the function and aesthetics are in conflict, the function must take precedence so that an architectural detail does not become a point around which use or service in a specific area of the building must revolve for the life of the building.* All main library areas, especially juvenile and study/tutor areas, must be supervisable from a fully staffed public service desk.

Appealing building environment. In both its interior and exterior appearance, the library must project an inviting and attractive atmosphere, should be well lighted, and properly cooled and heated during the change of the seasons and from day to night. The furnishings must be comfortable and attractive in appearance with sufficient balance between informal and study type seating. Materials of which the building is constructed and finished should be attractive, durable, and easy to maintain. Lighting of high quality is required throughout the library, both natural and artificial.

Emergency savings design/devices. There is a strong interest in making this building as energy efficient as possible in incorporating state-of-the-art technology in the design process and providing for the possibility of adding energy saving devices in the future; for example, passive solar panels; any costly technical provisions should be identified by the architect in planning and design discussions and the estimated cost of construction and payback period be evaluated in writing to the library

Potential for future building expansion. A new library building should be designed with the possibility of a 25-100% expansion in the future. The renovated and expanded library may not have the space to be able to plan for its further expansion. Consideration must be given at the early planning stages as to how the library will meet community library service needs that go beyond the 20-year life-span of the current building project.

Space Allocations. Brawner states that “for purposes of general planning, it can be assumed that 20 percent to [30] percent of a typical library building will be used for *unassignable* spaces required for wall and partition thickness, stairwells, corridors, nooks, crannies, electrical or mechanical chases, mechanical rooms, heating/ventilating/air-conditioning (HVAC), electrical equipment rooms, public and staff restrooms, security equipment, custodian’s closets, storage areas, loading dock areas, maintenance and cleaning, closets, and similar areas.

The balance of the net usable or assignable space is referred to as the *net square feet* or NSF; these assignable areas include lobbies, meeting rooms, offices, etc. The combination of unassignable and assignable areas equals the total or *gross size* or *gross square feet* (GSF) of the building. The smaller percentage of unassignable space in the building, the more efficiently planned the building.”

Codes and reviews. All construction must conform to local, state, and federal building code requirements, including seismic considerations for shelving, etc., as well as those regarding access by the disabled as per the ADA. All aspects of the planning and design will be reviewed by the Library Building Committee (herein afterwards known as LBC). A complete layout of all programmed shelving, furniture, and equipment must be available for review at each stage of design.

3.2. General Building Considerations -- Exterior

This section of the building program describes those elements of planning and design which are usually associated with the exterior of a building on the site. These considerations are presented as guidelines for the planning and design of the new facility. They vary in the level of detail presented. Specifically, these considerations are grouped under one of the following headings:

- Site Planning
- Building Considerations
- Operations and Maintenance.

Sensitivity to the surrounding environment and the needs of the expanded and renovated library and the rest of the site buildings must all be balanced in order to best optimize utilization of the site.

The architecture of the building, both its outward appearance and the interior finishes must be appropriate for the climate and environment of the Monterey Park area.

The planning of the building’s maintenance and operation is as critical as the planning of the new building itself. By taking the time for careful and thoughtful consideration of these issues, the design consultant will take the first step toward assuring a quality facility for the future needs of the City of Monterey Park.

3.2.1. Site Planning — The Library Site

Site planning should be the first issue addressed by any design solution. The design response to site planning of the new facility will be critical to the ultimate success of the solution. Key issues to be addressed include the need to move individuals from the various parts of the new building complex without jeopardizing library security, the character of the adjacent buildings and spaces, the need to provide clear public access to the structure, including effective pedestrian access to the building.

The planning of the facility should acknowledge the local climatic conditions by considering proper protection from the elements. The addition must be oriented and planned to take maximum advantage of the site and its environment.

Traffic Patterns

The planning of the facility should accommodate a volume of pedestrian traffic generated, both in terms of people approaching the site, and internal organization. Site development should also accommodate, to the degree possible, all delivery traffic requirements without conflicts. Traffic includes pedestrians as well as service and emergency vehicles.

Planning must be in conformity with the design and building codes appropriate to the community and should afford safe, well-lighted, easy access for persons of all ages at any time. Sidewalks and clearly marked walkways from all site access points to the front entrance of the facility should be provided.

Vehicle Access to Site

The Library is serviced by several different vehicles each week. Extreme care must be taken to ensure their safety, and to guard against exhaust fume emissions that could be brought into the Library through vents near the loading area.

Delivery

There should be one loading dock space for commercial deliveries and other vans and trucks. This function should be located sufficiently away from road intersections and far from residential streets. An adequate holding/receiving area inside the library is necessary near the loading dock for items to be held before transport elsewhere. Trash and recycling bins and dumpsters should be located near the delivery entrance for ease of staff access, and away from the public entrance.

The delivery area and adequate space for refuse pick up should be located, if possible, away from public parking. This is so that light delivery vehicles that will move in and out of this area on a daily basis will not have to traverse public parking areas and related traffic. Provide access directly from a service drive of ample width and turning radius.

Future Expansion

The facility should be planned to accommodate growth beyond the long-term planning horizon of this program statement. The initial design should consider expansion of both an internal and a horizontal nature.

Landscaping and Site Fixtures

The building site should be planned to take maximum advantage of the land available within environmental constraints. Special attention should be given to drainage planning for the total site and the new building. Consideration should be given to the integration of works of art in the landscape planning.

Any landscaping needs to be designed to avoid hiding places. It must be easy to maintain. It must be resistant or discouraging to any person walking on it or riding skateboards or bicycles over it. Neither rocks, wood chips, nor anything else which can be thrown or easily removed are to be used in landscaping. The landscaping should be pleasing to persons inside the library as well as those outside. The landscaping should require little, if any, additional water to that received normally in rainfall.

Night lighting and exterior lighting should allow safe egress for public and staff and facilitate building security. The public entrance, staff, parking lot, and dock/service door areas should be well lighted at night for safety and utility. Twenty-four hour path lighting should be provided in all major areas of the building with switching provided at the control panels. The switching control panels need to be behind the Circulation Desk. The astronomical clock needs to be behind the Circulation Desk so that staff may adjust it. Exterior lights should be controlled by an astronomical clock in the case of parking and ground lights and electric photocell switch in the case of security lighting. All exterior lights should be properly located and focused so as to avoid glare on adjacent property and streets.

Lighting. Provide adequate energy efficient exterior lighting, with attention to all entrances and exits to help insure safe use of the Library at night. The exterior lighting should be raised and/or enclosed to protect against vandalism and the elements.

Lights should enhance the building exterior and the immediate vicinity. The posts for outside lighting should be round, not square, to discourage vandalism. If possible, exterior fixtures should be obscured by landscaping, or integrated into the building design. Light fixtures should be of a design to resist breakage by objects such as rocks, etc. Moderate cost and ease of replacement must be considered. Energy efficient lighting is to be used.

Outside the Library Entrance

Library orientation begins with the approach of the user to the site, either as a pedestrian or as the occupant of a vehicle. The building must be easily identified as the library and the location of the public entrance unmistakable.

Approaching the Library

The library building should be clearly visible to motorists or pedestrians approaching from any direction. Entrance to the parking lot must be obvious and must not involve undue hazards to pedestrians. Whether arriving by automobile, bicycle, or on foot, the route to the library's entrance must be logical and easy to follow. Signs must be well located, illuminated at night and easily read at an appropriate distance. Outside seating should be provided somewhere near the library. It should be weather and vandal resistant. Use of metal seating should be avoided due to the high summer temperatures.

Public Entrance. First impressions are important. The public entrance should flow naturally into the Entrance Lobby and into the interior of the building. The experience

that residents have as they come into the building will influence their use of the library and their impression of service. Everything library users see and come into contact with should be logical, efficient, and aesthetically pleasing. A key design challenge will be the integration of a wide variety of services into a large open space, while maintaining acoustic separation and good visual control.

The library must have a single public entrance accessible from ground level. Everyone should be able to enter the library through the front entrance. Glass at the main entry will allow users and passers-by to view the library before entering. The entrance should be oriented to avoid glare and excessive transmission of heat through the glass. The single public entrance should be convenient to pedestrians and vehicular library patrons alike as well as to users coming from other parts of the complex. It should have automatic (sliding) doors, and be easily accessible for the physically limited user. A non-slip, mud rug or pedi-mat should be installed at the front door. Care should be taken not to install any barriers to access.

The public entrance should be designed so that there is no confusion as to which entrance to the building is the public entrance.

Parking. Immediately accessible public parking is critical to the maintenance of a high level of library use. Dedicated library handicapped parking, one space (preferably van size), ADA and/or local code, whichever is greater.

The layout of and the entrance and exit from the parking lot should be simple and aid in the ease of access to and use of the library. Pedestrian safety must be provided for since many young juveniles will be moving through the area. Designated walkways from all sections of the parking area should be provided. Wheelchair ramps must be provided where needed and required by ADA. A temporary vehicle pull off or stopping zone for the book return will be provided. This pull off zone must not interfere with persons entering and leaving the main entrance.

There should be no, or very limited use of islands in the parking lot. Use heavy, easily repaired bumper guards to protect wall, columns, etc. Any ramped roadway or inclined drives should be properly surfaced for traction of vehicles during wet and winter weather. Concrete, not asphalt, curbs should be used to avoid the need for constant repair.

Bicycle Racks

Functional attractive bicycle racks for bicycles designed to permit locking by owners, are to be provided in the immediate area of the public entrance. There should be racks for at least 10 bicycles convenient to the library entrance, but not in the way of pedestrian traffic. The racks should be sheltered from rain.

Outside Signage

The Bruggemeyer Memorial Library should be clearly identified to passing motorists and pedestrians and within the site complex. A marquee-type sign to announce events and activities is suggested. A sign on the exterior should indicate hours the library is open in large letters and numbers, and should be resistant to vandalism and weather. A sign with hours should be posted on the entrance door or immediately outside the door. A place on

the exterior of the library to hang a banner should be available and accessible, to announce special events.

Drive-Up Book Return

At least one drive-up book return unit (with one slot) that is easily accessible to motorists should be provided. The placement and design should be determined early in the design phase. It should be located where the vehicle or pedestrian can approach it easily and safely without creating a traffic hazard. The drive-up unit should be located with the opening on the driver's side. It should be weather-proof and large enough to handle daily traffic. It must be attached to the library building and enter into the circulation work area or staff work room.

If the Drive-up Book Return cannot serve both pedestrians and motorists, a separate book return (with one slot) near the entrance to the library or at least clearly visible to users approaching the library is needed. It should drop into the staff workroom.

If a Book Return cannot be located on the building, then two large book return units will need to be placed near the entrance to the library and the parking lot. The path to the standing units must be clear of steps so that library staff can empty the units daily from the library.

Public Telephones

A public telephone must be directly accessible to library users after the library is closed. It should be housed in a well lighted and sheltered space that is highly visible from the library entrance and the surrounding buildings and be near seating and a trash receptacle.

Ash and Trash Receptacles

Ash and trash receptacles should be available adjacent to the entrance to the library to make it easy for users to leave their trash, food, and cigarettes behind as they enter the library. These units should be designed for easy maintenance and simple identification. The receptacles and their enclosures must be vandal and animal resistant, and should complement the design of the building.

Flag Pole

Provisions should be made for the existing flag pole. The flagpole may need to be moved or removed. Wherever the flagpole is placed, it needs to be illuminated so the flag can fly both day and night. The cords used to raise the flag must have some way to be locked so that only authorized City staff can remove the flag. Consider use of a flagpole with an internal halyard to reduce wind-generated noise.

3.2.2. Building Considerations

The need to coordinate the planning of the proposed new library building on the site in a cost effective manner is paramount. This is of primary importance if the new library is to be successfully integrated into

the setting. The context of the site, in terms of surrounding environment and other buildings on the site must be taken into consideration, as should the scale and mass of the new structure.

Building Size

For purposes of general planning, it can be assumed that 20 to 30 percent of a typical public library building will be required for space which cannot be used for books or reading. This type of space is often called “*unassignable space*” and typically includes items such as:

- Walls or partitions;
- Electrical or mechanical chases;
- Mechanical rooms for the heating, ventilating, and air-conditioning (HVAC) system or electrical equipment rooms;
- Public and staff restrooms;
- Vertical transportation systems (fire stairs, open stairs, elevators);
- Security monitors such as video surveillance camera control centers; and
- Custodian, maintenance, or cleaning closets.

The balance, or the *usable space*, is referred to as the *net assignable square footage* (NASF) such as lobby, meeting rooms, reading and book stack areas, circulation desk, staff work rooms and offices. The combination of both unassignable and assignable areas equal the *building gross square footage* (BGSF) or total size. Further explanation on how square footage is determined and definitions are included in *Appendix C* to this report.

Entrances

While it is recognized that certain constraints may be present with the site for the new building, the discussion which follows is oriented toward the optimum approach to planning and design.

Public Entrance. Locate the entrance for easy visibility for persons approaching the building. The plan may include more than one entrance into a building foyer, but there *must* be only one controlled public entrance and exit point into the space where the library collections are housed. Include a vestibule with two sets of automatic, bi-parting doors for increased energy efficiency if the budget will allow for these type of doors.

Staff Entrance. Provide a separate staff entrance into the building. Include a communication system from immediately outside the staff entrance to the staff workroom. Provide a semi-enclosed windbreak and overhang for protection in inclement weather.

Exterior Materials/Finishes/Colors

The exterior finishes should be of a permanent or durable finish which should not require frequent painting or staining, etcetera. Exterior finishes should be treated with a clear anti-graffiti agent to a minimum height of 12 feet. The use of wood should be kept to a minimum. High quality masonry, natural stone, is most desirable. Vandal proof textures and paint must be used. All exterior paint is to be washable.

Utilities

Electrical and Telephone Service. The principal incoming electrical and telecommunications service lines to the building should be underground. The location of any new building services should be planned so as to minimize the need for relocation of existing utility lines. Weatherproof outlets for water and for electricity must be of vandal proof design and located on all exterior sides to provide for maintenance and special functions.

Water and Power Outlets. Provide sufficient water and power outlets on the exterior of the building, of a tamper-proof design.

The (*telephone feed*) MPOE (minimum point of entry) for the library should be located in the library telecommunications Room.

Mechanical Equipment. Exterior heating/air conditioning and other mechanical equipment must be secure and screened.

Operations and Maintenance

From a cost standpoint, the expense of operating and maintaining the new Bruggemeyer Memorial Library over time will eventually exceed the first-cost of construction. In order to minimize operational costs, conscientious planning is required in the selection and deployment of landscaping and building materials. The design of the building should be such that operating and maintenance costs are minimal. It should be easy to change light bulbs without assistance from extraneous equipment. Flooring materials and wall finishes should be low-maintenance. All furniture should be high quality, long-lasting, but with a minimum of maintenance necessary.

High-traffic areas of the library, such as the multipurpose room, lobby, circulation area, and walk paths to the information desk should have ceramic tile flooring for long-term durability and ease of maintenance. Staff areas should have primarily vinyl composition tile flooring. The staff areas at the circulation and information desks should have linoleum or other type of flooring that provides a durable yet cushioned surface. Other public areas should be carpeted. Public restrooms should have ceramic tile for floors and walls with phenolic partitions for durability, maintenance, and resistance to vandalism.

Library Hours of Service

The library facility will probably be open more hours than any other public building of the City. It will probably be used and visited by more persons of all ages than will any other public building in the City. Maintenance should be planned accordingly.

Security Planning

The site plan should be designed to help insure safety for library users and staff and security for the library building and its valuable collections and equipment, including computers. Include the following considerations:

- Plan low-profile landscaping for the approaches to the library entrance;
- Avoid landscaping, retainer walls, and other exterior elements that may block the sight of the library entrances and windows;
- If possible orient the staff work areas to provide visual control of the approaches to the library;

- Provide adequate lighting on high standards with protective covers, for the approaches to the library building. Include an automatic timer to maintain security lighting at night when the building is closed.
- Orient the library entrance and interior areas to provide a vista into the Library when the building is closed.

Provide an intrusion alarm system with recessed magnetic contacts on all exterior doors, glass break detectors, and passive infrared motion detectors in key areas with a Radionics control panel. Emergency exits in the public area should be alarmed and report to an annunciator panel at the Circulation Desk.

Exterior Maintenance

Grounds maintenance will be provided by City staff. There is no need for space within the Library building maintenance area for the storage of lawn equipment and other gardening implements.

Recycling Bins

A recycling storage area for newspapers and other recyclable materials should be protected from the weather and be near the delivery entrance or loading dock.

3.3. Interior Design Criteria

This section of the building program for the new Bruggemeyer Memorial Library identifies a number of general building interior considerations that the library consultant and the Monterey Park Library Board and Library Director believe are important for a library facility that strives to be functional and cost efficient to operate.

Design consultants will be able to adapt these considerations as appropriate in order to achieve a building design that is responsive to the total needs of the Library and the community. These considerations apply to both the design process and the construction documentation process. They are intended to stimulate discussion and narrow potential options by advancing proven solutions utilized in other libraries. In order to focus the efforts of the design architect and engineers, these considerations are grouped into four categories:

- Architectural considerations;
- Structural Systems Considerations;
- Mechanical Systems Considerations; and
- Electrical Systems Considerations

Each of the major building systems supporting the new library is described to begin to define the scope of construction in as much details as possible. These discussions are intended as guidelines for the designers. They include planning and design issues which affect both construction and operational costs.

Energy Conservation and Maintenance. The design architect should be aware of the owner's commitment to reduce the long-term cost of facility operation. Energy conservation planning is a key element in meeting this goal. The approach of the design architect to energy conservation planning should be based on a comprehensive analysis of all alternatives for conservation. A comprehensive approach should include exploration of alternative for the purpose of energy conservation in the design of the Bruggemeyer Memorial Library.

Life Cycle Cost Analysis. The building envelope and proposed mechanical and electrical systems should be thoroughly analyzed for life-cycle costing using state-of-the-art computer programs and current energy costs. This analysis should be completed, while always being sensitive to the needs of the owner (the City of Monterey Park) and architect, by responding with the most cost effective design available. The intent of this process is not just to reduce the first cost, but rather is intended to provide an overview of options available to the owner, and the initial and long-term costs associated with each choice.

3.3.1. Architectural Considerations

While the building is composed of a number of systems, it is the architecture that will be readily experienced by the staff and general public. The new Bruggemeyer Memorial Library building should be uplifting and invigorating, with an environment that delights the senses and stimulates the mind. The building's appearance and appeal should mirror the intellectual treasures and explorations it encompasses.

The following pages discuss those considerations which affect how the public experiences the architecture of the Library. The initial discussions are broad, with far-reaching implications, representing issues that require the early, big decisions to set the direction of the architectural design. The latter pages pinpoint the more tangible issues of architectural finishes, furnishings, fixtures, and equipment. While

these items make up the tactile experience for the user, the initial decisions have, by far, the greatest impact on the direction and ultimate success of the architecture.

Spirit of Design

The building should be an active space alive with intellectual inquiry and the movement of users and staff. It is important that first-time users and infrequent users not be overwhelmed upon entering the building. Rather, the building's environment and ambiance — especially the lobby and entrance — should be designed to convey an inviting sense of warmth, orientation, and organization. Users and visitors should feel welcomed upon entering the building. They should be able to become acquainted with the building's interior at their own pace.

Some users may choose to utilize the signage and to make their own way to the area of their choice without assistance. Others may seek staff assistance immediately.

Upon entering the building lobby, users and visitors should be able to easily discern the major areas of the library they are seeking, such as the Circulation Desk, Online Public Access Catalogs (OPAC), the Information Desk, the Periodicals Area, and the Juvenile Area, the Family Literacy area, with a minimum of time and staff assistance. This can be accomplished through a combination of lighting, traffic patterns, furnishings layout, effective signage and graphics, and a building directory. The signage and graphics should guide persons to the major areas of the building and provide detailed information about the respective areas when they are reached.

Energy Conservation

The renovated and expanded library will be standing for many years. It is imperative that the building be designed for initial and future energy conservation. This calls for careful consideration of both passive and active energy conservation methods. Incorporating these conservation features may increase the initial building cost, but the actual life-cycle cost over the usable life span of the building can result in long-term savings. All systems should be designed to accommodate the possible future corresponding technology.

Glass Treatment. If possible, orient the building so that the major facades face north-south rather than east-west, for energy savings on glass exposures. Major glass exposures should be in areas which will afford the best views. Consider reducing summer solar heat gain by shading glass exposures with canopies, louvers, solar glass screens, etcetera. Balance these possible features with ongoing maintenance cost considerations. Shaded glass admits only one-quarter of the radiant heat admitted by un-shaded glass exposed to sunlight. Double glazed, shaded, heat-absorbing glass reduces heat gain by about 85 percent. Reflective glass reduces heat gain by about one-third. The use of tinted glass in windows to filter out ultraviolet rays may eliminate the need for blinds or shades.

Open Modular Design

The design should give special attention to limiting physical and psychological barriers to public service such as desks, counters, electronic security systems, rails, and other physical masses. While desks, counters, screens, and partitions are sometimes necessary, consideration to the design, configuration, color, texture and use of light will keep these elements on a human and manageable scale.

Control with Minimum Staff. The building and furnishing layouts must be planned so that visual control of public areas can be accomplished with the minimum number of staff. Give special

attention to visual control of entrances, exits, entrances to public restrooms, the Juvenile area, the Media area, the Young Adult area, and group study areas.

Book Stack Area Planning. Plan a modular building incorporating evenly placed load bearing columns at optimum increments, preferably no closer than 28 feet. Provide a minimum of fixed walls with open planning bays to accommodate combinations of three-foot shelving sections. Eliminate thresholds or doorsills, as they interfere with the movement of book trucks. Consider the use of Unistrat bracing with integrated sleek lighting for the “90” bookstack areas.

Office Area Planning. Open-office systems furniture, utilizing adjustable panel systems to create staff workstations should be utilized in the building as the budget allows. The open office system should also be considered for some public spaces.

The office areas of the building should receive the same attention in limiting physical and psychological barriers, bearing in mind that the staff who work here may typically spend their full work day in this space.

Movement Within the Facility

Recognition of the ultimate user of the new Bruggemeyer Memorial Library — the public and staff — is critical to the success of the design. As with all other parts of the City’s services, the library is primarily a service to its community. The ability to reflect this in the planning and design of the Library, in terms of spirit, scale, and ease of use should be an important consideration in developing a design solution. Planning of the facility, as well as the building scale, should enhance time-movement efficiencies relative to such issues as movement from parking to the building, accessibility of information, public queuing for the Information Desk and Circulation Desk, etcetera.

Daily Visitors. The potential volume of people visiting the new Library is estimated at over 1,000 visits per day. This includes recurrent visits by users and visitors through the course of a day. The planning and design of the facility should instill community pride in the Library and promote the feeling that each patron has been served. These users include:

The Short-Term User. This group comprises a portion of the library’s daily patronage. They are users who enter the library for a brief period of time to return materials, pick-up reserve books, or to obtain quick information or reference data. Typically, these users stay in the library about 15 (fifteen) to 30 (thirty) minutes.

The Long-Term User. This group of users come to the library for extended periods of time to browse the collections, read, use other materials in the library, use the media equipment, or do extended information or reference searching. The new, larger and better equipped library facility will attract an increased number of users in this category.

Group Participants. These users come to the library, as part of a formal or informal group, to participate in a particular activity or program. The group participant user will increase following the opening of the new Library, given the added technology space and the multipurpose room.

Staff. This group should be provided with a dedicated staff entrance.

Others. This group may use either the main entrance or the staff entrance, whichever is more convenient and/or depending upon Library policy. Included in this group are persons coming to

the Library on business such as sales representatives, service vendors, and truck drivers making deliveries.

The planning of the facility should accommodate the large volume of pedestrian traffic generated, both in terms of people approaching the site and internal organization. Additionally, the facility should minimize frustration with finding one's way through the building. Within the context of a singular identity for the new building, the hierarchy of entry relationships should be:

- Clear identification of access to the building through a single main entrance; and
- Once inside, clear identification of access to all portions of the building.

Barrier-Free Design. All libraries serve a broad spectrum of the community, including persons with permanent and temporary handicaps, persons young and old without the strength to open doors, the hearing impaired, and persons with limited or no eyesight who depend on special Braille instructions and audible signals for elevators and crosswalks. It has been estimated that twenty-five percent (25%) of the total population has been physically impaired at one time. Barrier-free design directly benefits all users, including the handicapped, by improving the general usability and safety of the building. Doors are easier to open, and there are fewer tripping and falling hazards.

For many years architects have sought to design buildings, especially public service buildings, to be barrier-free. These buildings provide the same opportunities for access and use by handicapped persons, users and staff alike, that are available to citizens without physical handicaps. Federal, state, and many local governments have now provided standards and building codes to help remove these barriers. Also the building and furnishings industries have moved to provide new technology, equipment, and design features to meet these standards and codes.

The entire building will be accessible to the physically disabled. All spaces must be designed to meet national, California and local jurisdiction codes for handicapped access. Aisles between stacks and carrels must be designed for accessibility. Drinking fountains, public telephones, and public service desks should be at a height that can accommodate wheelchairs. Restrooms must be handicapped accessible. All appropriate ADA requirements must be conformed to by the architect and contractor.

Second Floor

The second floor needs to be able to be closed off from the first floor in case there is not adequate staffing at a certain time. This is to be a regular floor with no overlook onto the main floor. The top of the stairs should not allow anyone to throw things on those below. The elevator also needs to be able to be locked off.

Public Stairs to / from the Second Floor

The stairs have to be built in such a way that the second floor can be closed off when there is not enough staff to keep the floor open.

Consideration needs to be given to moving LAMP, Technical Services, the Staff Room, the vending machines, Staff restrooms, Administration, and the City Librarian to the second floor.

Graphics and Signage

A library is to a great extent a self-service institution. Graphics and signage that will assist the users to find a particular service or book with minimal staff assistance are an essential design element. Graphics can be architecturally and aesthetically pleasing, as well as functional. They should avoid negative wording. The wide variety of services offered in libraries also requires explanation and graphic guidance. In many cases lighting, colors and furnishings will assist users in differentiating services. *For graphics to work effectively they must be planned early in the design sequence* so that lighting, furnishings and graphics locations can be integrated and coordinated. In some cases, flyers, posters, maps and directories may be more appropriate than signs. A logical building design allowing patrons to navigate without excess signage is desired.

Attractive, contemporary, and very legible, easily revisable signage of both directional and informational characters, for all major service and collection areas, should be an integral part of the interior design. A logical building design allowing patrons to navigate without excess signage is desired. Graphics should be incorporated into the design of all public areas. A specific and coordinated sign and labeling system should be integrated with the building graphics system designed by the architect and bid as part of the general construction contract.

Basic signs should be consistent throughout the building. Signage and graphics should be included in the design process from the beginning of the project. A schedule of signs and graphics should be developed, reviewed, and revised *beginning at the schematic design stage* so that signs that are to go in and over public spaces are coordinated and fit in the spaces designed for them, not adjusted to fit in at the end of construction.

Book stack signage should be based on the Modulex (Lego style) or similar National Visual system. The signage should be designed and installed so that trained staff can make changes with ease over the life of the library.

Graphic design, in terms of a signage system for both the interior and exterior, and architectural design should be conceived and planned in concert to announce the library's resources and services. The designers should standardize the typeface for all signage. Signage must also comply with ADA guidelines for size, contrast, etc.

Potential may exist for the design of appropriate donor recognition to be prominently displayed in the lobby. Provide space for a separate system for possible contributors to the building. Confer with the Library Building Committee for details.

The architect must prepare a layout and proposed design for inside signage noting special areas, collections, ADA required emergency exits, etc. This will include shelf signage. Library hour signs and special notices should be placed in front windows or other easily visible area.

The Integration of Art

The new Bruggemeyer Memorial Library should be planned to incorporate some original art for the interior and/or exterior, as well as rotating exhibits. Consideration should be given to different art forms, and to integration of art as part of the functional areas and furnishings. Art forms to consider include sculpture, mosaic or textured screens, wall hangings, mobiles, paintings. Art forms such as paintings are often provided for temporary display by local artists. Care must be taken to identify areas for art that can be visually controlled by staff to prevent damage or theft of art objects.

Nationally, general practice specifies that new public buildings should budget one percent of the construction cost for public art.

The library design should allow for the possibility of permanent and/or temporary display and exhibit of artwork as an expression of the community's identity and interest in the arts. Thoughtful planning must go into developing appropriate exhibit and display locations and accommodations. The space should be located in such a manner as to allow people to view the material and engage in normal conversation without disturbing library operations.

Acoustical Treatment

Substantial noise is generated by a heavy flow of users, equipment (most make operating noise) and activities. Since an open design increases the potential for sound problems, special attention must be given to the acoustical treatment within this building. Ceilings are to be of acoustical material and carpeting should be used in all but extremely high traffic areas of the building. However, carpeting may be used at the circulation/information desk area. A separate study room(s) or conference room(s) will be used to provide a place for people to escape the general activity into a specific room. It should be noted that heavy use by children and young adults is anticipated, and it is necessary to keep the provisions for the juvenile in the community in proper perspective with all the other types of users and groups that the library is trying to reach in the community in the development of this plan. Some critical sound operation points are the juvenile area, restrooms, circulation/information area, staff lounge/workroom area, and meeting/homework/study/computer room(s).

One of the critical factors influencing success of the Library from the user's perspective will be acoustical quality of the interior environment. Careful consideration during conceptual space planning and in subsequent phases of construction detailing and material specification must be given to the control and isolation of noise.

This is important because of the acoustically conflicting use patterns experienced in most libraries which increase the potential disruption of work, studying and reading activities. Today, trends toward open library planning and the increasing use of audio/visual and electronic equipment significantly complicate proper acoustics.

All elements of the Library's interior space play a role in optimizing its acoustical conditions – from the buildings' size and shape to the character of its floors, ceilings, walls and furniture. In order to identify specific acoustical treatment for the interior of the new Library, an analysis of individual spatial conditions will be required during the architectural design process. A number of general recommendations, however, can be made.

To provide an overall level of ambient sound absorption, the provision of carpeted floor surfaces and a ceiling system with a high degree of sound absorption is highly recommended throughout the occupied spaces in the new Library. While sound absorption is important, long-term durability is also important. Use of carpeting should be limited to book stack and reading areas and ceramic tile should be used in high-traffic public and staff areas.

Subject to defined functional adjacency requirements, care should be taken to acoustically separate reading and study spaces from noise generating activities areas (i.e. mechanical equipment, computer equipment, office machines, corridors, areas where loud speech occurs, the restrooms, computer rooms, etc.

In cases where the spatial organization of the facility prevents the use of distance to buffer conflicting acoustical environments, the provision of full-height partitioning may be required. For library settings, it

is frequently more feasible to isolate noise generating activity areas rather than acoustically sensitive study or work areas.

In those areas where there are a large number of staff workstations in a non-partitioned setting, the lack of vertical sound absorptive surfaces will warrant special consideration of acoustical control. The use of modular acoustical panels between individual workstations may adequately compensate for the absence of partitioning.

Interior Materials and Finishes, Colors

The specification of the decor of the interior of the new Library during the detailed design process will be largely a matter of aesthetics, function and costs. Another factor which should be given equal attention is the durability and resistance to wear of the materials and finishes utilized by the project architect. Products must be selected with the need for minimal maintenance as a high concern. Maintenance is an expensive and continuing budgetary item in any public building; all reasonable means of reducing maintenance costs must be pursued.

A public building, such as the library, is frequently caught in the dilemma of high public use, with some abuse, and a low budget available for maintenance and capital improvements. Therefore, it is essential that building materials and finishes be selected with an emphasis on long-term attractive durability requiring minimal upkeep. This may mean a higher initial cost in some cases; however, the architect must be prepared to justify recommendations beyond the aesthetic factors. Since the colors used in the building also relate to the color and finish of the building fixtures, the *Library Building Committee* will work on the shelving and furniture layout, selection, and specifications.

Tackable wall coverings are preferable in public notice areas such as the meeting room and entry. Washable paint is to be used throughout interior of building. Painted surfaces in all high traffic areas with semi-gloss, eggshell, or satin washable flat paint finishes are essential. Glass within reach will be fingered and require constant maintenance. All glass must be safety glass.

Restrooms must have durable, easy to maintain materials such as ceramic tile — preferably from ceiling to floor. Partitions and walls should be as vandal proof as possible.

Floor Coverings

The flexibility required of the floor plan for the Library carries over to the floor finishes as well. Ceramic tile should be used for restrooms, lobbies, and other high-traffic public areas. Vinyl tile should be limited to the staff work areas. Other public areas should be carpeted. Consider the acoustical performance of carpet wearing performance, color fastness, texture, fire resistance, non-allergenic qualities, and anti-static qualities. Vinyl or other durable cushioned flooring should be utilized for the staff side of circulation and information desks.

Carpeted areas require less time for cleaning and maintenance than hard-surface or vinyl flooring, which require waxing, stripping, and buffing. The extensive carpeted areas will require the purchase of commercial-grade carpet cleaning equipment for proper cleaning and maintenance.

Consider using flamed-finish granite or other hard flooring surface for the entrance lobby. Provide non-slip surfaces for all non-carpeted areas.

Carpet is to be included in the total general construction budget with specifications prepared by the architect. Carpet is required in virtually all public areas. A few non-carpeted areas may be in the entry

foyer (except for mud rug), loading areas, and some extremely high traffic areas; i.e., in front of circulation/information counter. However carpet may be placed in front of the circulation/information counter with carpet also put on face and toe board of counter. Heavy duty commercial carpet is recommended.

Suggested floor coverings by area are: (some areas may have a combination)

- Custodial storage, mechanical room, delivery – concrete or vinyl tile
- Entry – quarry tile or recessed mud rug or equivalent
- Public areas – heavy-duty commercial carpet
- Restrooms, public and staff – ceramic or quarry tile
- Staff lounge – vinyl, quarry tile, or carpet
- Staff workroom – vinyl or heavy-duty commercial carpet

Carpet specified should be of a high quality, commercial grade wool or high density low pile acrylic fiber preferably with the pad woven on the back. Material and colors should be selected with low maintenance and the ability to mask soilage in mind. The most durable high quality carpet that can be afforded should be used since the cost of re-carpeting a building is very expensive and should be delayed as long as possible. A 20 year carpet life is preferred.

The ease with which worn carpet areas can be replaced and the future Carpet layout should facilitate zoned replacement in high traffic public areas. Carpet specification should include a 5 - 10% overrun to be stored for repair and limited replacement. The pad must be thin and dense with little compression so that heavily laden book trucks will roll easily and quietly.

Under carpet wiring for telephones, computers, and electrical service will be considered. If installed, all large electrical recessed plates must have a carpet insert to match the rest of the carpet.

Only if a separate vestibule is constructed, because of a noise factor, should the floor be made of serviceable hard-wearing material such as quarry tile. This may extend to the public side of the circulation and information areas.

Wall Finishes

Vinyl wall covering should be required for selected areas such as the copier center, lobby, and group study rooms. Consider specifying wall finishes with the following characteristics:

- Complying with durability standards of ASTM F793 for Category III, or better;
- Mildew resistant;
- Non-staining; and
- Coated with a performance enhancing coating, such as *Scotchguard*.

Also consider using heavy-duty wainscoting and corner guards or other hard surface for the areas of the building with high traffic of bulk materials such as staff work areas and the receiving area.

Bookstacks and Shelving

Bookstacks will be located throughout the library. All bookstacks must be wheelchair accessible, with aisles 42" wide to handle a wheelchair and one passing individual. The standard bookstack will be 90 inches high, double-faced where possible. The stacks should be laid out in a logical and intuitive manner

and include end panels with signage so they can be used easily by the public. Most shelving is to be standard library style shelving. Bookstack design should also include these considerations:

- A standard section of bookstacks is three feet wide and 90 inches high, including the frame. Consider the use of Unistrut bracing for 90 inch shelving.
- Stacks must be seismically braced to meet California seismic requirements.
- A range of shelving should be a maximum of ten sections long, if possible, to make it easy for readers to move from one aisle to the next.
- Floor loading in all bookstack areas should be adequate to accommodate possible compact shelving at some future date.
- Lighting must be provided throughout the bookstack area, associated with each section of shelving. A lighting study is required as the design develops to assure that lighting is adequate for reading the spines of books on the top and bottom shelves as well as those in between. Minimum glare is required.
- Seating should not be combined within stacks as this would require a wider aisle and larger, less efficient area. Seating areas can be alternated with stacks so users can find convenient seats near books.
- Gliding step stools should be provided for each aisle to reach top shelves. Sliding ladders should not be utilized as they create an attractive nuisance problem for children.
- Backstops will be required for each shelf, with a few exceptions, to prevent books from being pushed through to the other side and from falling down behind sections.
- Canopies on tall shelving are unnecessary and often create ght shadow from overhead lighting. However, canopies should be included with 42" and 66" high shelving. If canopies are used, the lighting study should be done with models that have the canopies in place to assure shadows do not interfere with lighting of books on the shelves.
- Aisles between ranges must be a minimum of 42 inches wide to meet the requirements of the Americans with Disabilities Act and California regulations.
- Unless otherwise stated, all base shelves should be twelve (12) inches deep, and all adjustable shelves ten (10) inches deep.

All bookstacks in the public spaces should have end panels with flush-mounted label holders (range finders) at each end of double-faced ranges. The assignable space section of this report assumes that the clear aisle space within the bookstack ranges will be 42 inches. Cross and end aisle space must comply with access guidelines for persons with physical handicaps. Consider the use of "universal" shelves in selected areas which have the ability to be flat or slanted. Requirements for specialized periodical, multimedia, and paperback shelving units are described in the *Area Data Forms* in *Section 6* which describes the area in which these materials are housed.

Library shelving is a major factor in the design and budget of the building. The shelving requires the greatest amount of attention in layout and also constitutes the single most costly equipment item. Shelving, delivery, and installation will be part of general construction contract. However, the LBC must work with the contractor on the shelving layout, selection, and specifications.

In preparation of specifications, Wilson, Estey, or Library Bureau shelving should be used as the minimum standard acceptable. Shelving may be metal or wood or a combination of the two and may include canopies and side panels.

All seismic considerations and requirements must conform with the latest seismic standards. Calculations prepared and signed by a structural engineer licensed in the State of California shall be submitted for review. Calculations shall indicate that the shelving complies with design criteria herein using design

procedures of the latest edition of the UBC. Calculations shall be titled as applicable for the specific unit proposed and for the specific project. Such a title shall be over-stamped by the engineer's seal on the first sheet. Each shelf will have a minimum clearance between end brackets of 36". A mix of standard, hinged periodical, pull-out, sloped with zigzag inserts, dividers, and other relevant accessories will be used.

Shelving must be arranged so as to provide both public and staff with a logical pattern and easy access to print and non-print materials areas. Shelving must be arranged in such a fashion that they may be easily controlled or under view of the circulation and information desk staff. Shelving ranges shall be broken up with patches of seating of various types. This is so that users will find it convenient to sit down with materials without having to search long distances for table seating or chairs.

Computers and Monitors

The library building must be planned for extensive future use of personal computers, including the online bibliographic and inventory control system. Computer terminals and printers will be used extensively by the general public and the staff throughout the building. Plan the computer stations for the public and staff in such a manner as to allow a user to sit at arm's length from the front and three to four feet from the sides and back of the monitor.

Ceiling Heights

Because of a library's many open interior areas, it is felt appropriate that the ceiling maintain an overall height of not less than 10 feet. The modulation of floor to ceiling dimensions within portions of the library building (over service counters, within the main lobby, and in exhibit areas) may be desirable. A uniform ceiling system throughout the majority of the space, however, is preferable in order to increase interior flexibility and to avoid costly renovation when changes of use occur.

The major areas of the building should have ceiling heights which permit complete use and rearrangement of 90 inch high library shelving. Extension of light fixtures, signs, sprinkler heads, etc., into the clear area above shelving should be evaluated in all proposed designs.

Restrooms

Locate public restrooms near the entrance to the Library. Provide a staff restroom adjacent to the Staff Room. Provide a children's restroom near the Juvenile and Story areas.

Public restrooms must be accessible and easily supervised from the circulation/information area. Accessibility from the main entrance is necessary. After-hours use by meeting room groups is a necessity with non-entry to other library areas. Separate (men and women) public facilities will be needed, but the staff restroom may be unisex.

Keyed locks will be provided for restroom entrance doors so the library staff may have control if necessary. Privacy lock and security lock (for use by staff) are required. Provisions for handicapped persons must be made in all restrooms. Adequate clock-controlled ventilation is required. Motion lights should be installed. Key operating light switches in each public restroom. The emphasis in the restroom design should be on the utility, durability of materials used, ease of maintenance, and ventilation.

The space allowance for public and staff restrooms is included in non-assignable space. Restroom floor and wall surfaces should be ceramic tile for long-term durability and ease of maintenance. Toilet fixtures and accessories should be vandal-resistant and should include at least:

- Wall-mounted water closets and self-flushing urinals;
- Ceiling and wall mounted phenolic partitions which are durable and vandal resistant with tamper-proof fasteners;
- Partition doors with coat hooks;
- Double-roll toilet paper dispensers;
- A flat floor with a 1/2-inch marble door threshold for holding overflow water;
- Mirrors; consider locating mirrors away from sinks in order to reduce sink maintenance costs related to clogged drains from combing hair;
- Wash basins with automatic shut-off faucets set in enclosed cabinets for stability, use high-quality, durable fixtures, such as Bobrick;
- Foam or liquid soap dispensers located adjacent to wash basins so that excess soap is discharged into the basin;
- Coin-operated sanitary napkin and tampon machines in the women's restrooms;
- Sanitary napkin disposal container in each stall in the women's restroom and the staff restroom;
- Electric hand dryers and paper towels in the public restrooms, but paper towels only in the children's and staff restrooms; check on current type of towels used; e.g., folds;
- Include a diaper-changing station in each public restroom;
- Provide adequate shelf space, including fold-down shelves in the toilet stalls, as users will be carrying books, purses, etcetera.
- Assure accessibility for use by the physically handicapped, as outlined by applicable building codes;
- Include a hose bibb and floor drain in each restroom.
- Include waster receptacles in each restroom.

Custodial Facilities

Provide a maintenance closet to store maintenance and cleaning supplies and equipment. Include plumbing with either a utility floor drain with eight-inch curbing, or a mop sink, in each closet. Provide adequate venting and exhaust of cleaning solution fumes, mops, and cloths. Provide polished concrete or tile flooring .

Building Maintenance

Ease of maintenance should be one of the primary design criteria. General planning considerations include the following:

- Design external and internal window sills, ledges, and all other horizontal surfaces to minimize potential of catching dust;
- Attempt to eliminate corridors that have projections into them. Drinking fountains in corridors should be avoided wherever possible;
- Where possible, mount toilet fixtures, drinking fountains, and other items on walls rather than on the floor;
- Where possible, provide round corners that do not present hazardous sharp edges;
- Avoid the use of ornamental brass or bronze hardware or trim which require excessive labor for cleaning and polishing. If possible, utilize stainless steel or brushed aluminum;
- Utilize rubber or vinyl cove base, rather than wooden baseboards, to provide a scuff-free surface and rounded joints which are easily cleaned;

- Provide adequate sources of both hot and cold water for custodial use;
- Provide an ample number of electrical outlets for custodial use in corridors and large rooms, with 30 amp receptacles provided on 75 foot centers in all corridors to serve maintenance equipment. An outlet should be located near the door or opening of each room or space;
- Locate light fixtures for easy lamp replacement whenever possible. If high ceilings are included in the approved design, lamps must be able to be replaced without mechanical assistance;
- Optimize the use of vision glass in doors to limit unsightly smudges;
- Use paints that are durable and washable, or use other washable materials such as vinyl wall covering; and
- Consider glazed or ceramic tile for fixture walls of the restrooms.

Preventive Maintenance Construction. Require from all design engineers, contractors, and/or sub-contractors, five copies of a preventive maintenance manual that provides a timetable for detailed maintenance for all mechanical and electrical equipment. These manuals should provide names, addresses, and phone numbers of suppliers, parts manuals, etcetera. These maintenance manuals should also provide timetables for care and cleaning of all building furniture, fixtures, and equipment surfaces. Photograph all installations of wiring, plumbing, etcetera that will be covered by flooring, or walls, for expediting future repairs and changes. Require five complete sets of as-built drawings for all custom items and the building wherever actual construction varies from the construction bid documents. Require the contractor to provide both operating and maintenance training for all installed systems. All computerized building systems should be certified as Year 2000 compliant.

Finishes for Floor, Ceiling, and Wall Surfaces. Where feasible, provide stock, off-the-shelf and in-the-catalog products and finishes of the supplier or manufacturer. To facilitate patching and repairs, these stock items should include floor covering, wall covering, ceiling tiles, paints, stains, upholstery, fabrics, and plastic laminates.

Added, or Attic, Stock. The Architect shall require in the construction documents that certain suppliers provide the owner with an added stock of their product for maintenance or repair. It is important to retain a stock of these materials from the same dye lot, manufacturing runs, etcetera, to insure proper matching. The following items and amounts are suggested:

<u>Item</u>	<u>Amount</u>
Wall Covering	10 percent
Ceiling Tile	10 percent
Carpet	5 percent
Vinyl Composition Tile	10 percent
Ceramic tile	5 percent
Fuses	1 for each installed
Breakers	5 percent of branch circuits
Paint	10 percent
Water Treatment	1 year supply
Air Filters	2 complete changes
Smoke or Heat Detectors	1 of each type
Fire Protection Sprinkler Heads	3 percent
Lawn Sprinkler Heads	5 percent
Anti-graffiti Agent and Remover	10 percent

Laminate (if included on
reading tables)

10 percent

Book Returns

The outside (wall slot mounted) book return for print as well as non-print items, should have a close visible relationship to the public entrance. The book return room should be adequately planned for book chute and reception into a depressible book cart and to be installed according to the manufacturer's recommendations and to include a lock. The room should be large enough to maneuver the cart. Materials returned to the library in this manner must be contained in a fireproof room with a fire detection system near the Circulation desk area, if possible. A smoke detector, floor drain, and a one-hour fire rating for the walls, ceiling, and door must be incorporated. This book drop room will be equipped with a ceiling light preferably on a motion sensor. The return slot outside should be at a height for easy use by juvenile, wheelchairs, as well as adults. It should be well identified and adjacent to a vehicle pull off or temporary stopping zone. It should be well lighted from the outside and protected from the weather.

If unable to accommodate outside wall book return, heavy, vandal proof stand-alone return may be used. This must be bolted to sidewalk and be accessible from public drive area.

Adequate room will be made for an additional book return in the Circulation / Information counter and will also have a depressible book cart or a slide to the work area.. A slot large enough for print as well as non-print materials will be made in the front base of the counter.

Display Area/Fixtures

All existing and/or new works of art such as murals, etc. that are to be attached to the building interior and exterior or free standing should be included in architect's design, adequate space made, installed by contractor, and be a part of the construction bid. A wall acknowledgment plaque will also be included in the construction bid.

Display cases may be free standing or built-in. Free standing should be easily moveable by two persons. Display areas may be in the foyer, at the book stack ends, etc. and should have lockable access and perhaps be lighted. Slat wall with accessories may be used. Also tack wall may be provided in designated public and staff areas. An informational wall for posting public notices, literature, etc. should be available inside the entrance area and may be glassed and locked for staff control.

The display of art work by hanging from wall tracks should be considered in designated areas – lobby, meeting room, etc. Bulletin boards if used must have a sliding, locking glass cover in public areas. Chalk, marker boards, and cork may be used in meeting room, staff lounge, staff workroom, etc.

Entrances, Exits, and Doors

There will be only one main public entrance/exit to the library service area, at ground level. The entrance must be highly visible and well identified from the inside and the outside of the library. Also, it must be easily accessible from the parking lot and sidewalk. The entrance should be located to protect the doors from wind and weather and energy savings should be considered. Automatic sliding door openers should be studied by the architect with recommendation as to reliability and maintenance costs.

The entrance must be inviting, utilizing a generous amount of glass to provide visibility to the interior of the library and activity within the building. It is very desirable that part or all of this area be glazed so that it is visually supervisable from the circulation and information area.

A separate entrance/exit should be provided to the Multipurpose Room at ground level. Restroom facilities should be secured from rest of library for after hours use by persons using the community meeting room. *A staff/delivery entrance* should be provided, with as near a direct access to the staff workroom and staff lounge areas as possible. It is desirable that the door be situated away from the main public entrance to avoid confusion. It must provide the staff exiting at night a secure, well lighted and immediate access to the staff parking area.

Space must be provided for library and public announcements bulletin boards, pamphlet racks, display cases, public water fountains at two heights, etc. in main entry. Also space for possible public telephone. Water fountains must be surrounded by tile or similar water resistant material. Material to resist scuff marks around the water fountain must also be placed at the water fountains.

All emergency exits will be equipped with alarm devices and be mounted flush with exterior walls and have no exterior hardware. All doors must be wide enough to permit standard size wheelchairs. Doors in staff workroom and storage areas should be equipped with a magnetic or equivalent hold device.

Some interior and exterior doors may be all glass or half glass. All interior doors must be a minimum width of 36" (or ADA standards) and be provided with a glass panel for control and safety and "hold open" devices. Exception to glass panels may be made such as in the Multipurpose Room.

Workroom, restroom, meeting room, entrance/exit, and staff area doors where there will be movement of book trucks and equipment on carts must be protected with stainless steel or similar kick plates. Doors into staff offices and work areas may remain open much of the time so placement with regard to the view from the public service desks and other spaces must be considered and screening provided if necessary.

Door swings must be coordinated with the shelving and furniture layout and circulation patterns. Entrance doors may swing either direction. A double-door or sliding door vestibule at the main entrance should be utilized to prevent drafts and to reduce cooling and heating lost. No center mullion should be used. Wall cavity (sliding) doors may be considered in tight areas where the door may be closed occasionally. Meeting room doors must be equipped with buffers or closing devices that reduce the sound of closing to an absolute minimum. All doors should have magnetic or equivalent lock-open devices.

There should not be any barriers present for the handicapped or elderly. Flush thresholds and doors which open easily are necessary. If used, sliding, not swinging doors should be specified. Door adjustments must be easily accessible by maintenance personnel.

Furnishings

The Library Building Committee will be responsible for selection and purchase of moveable furniture. Purchase of moveable furniture may be in the construction contract (depending on terms of contract). The furniture supplier will be responsible for timely delivery and installation. In addition to appearance and scale, furniture, study carrels, and chairs should be selected with utility and long term durability in mind. Proper reinforcement and replacement of components including covering are a prime consideration. Standard stock items and finishes should be specified. All built-in furnishings will be in the construction contract. They may include counters, workstations, carrels, shelving, etc. Modular units for circulation counters, office areas, etc. must be considered.

Wood, high impact plastics and laminates, metal, and fabric covering (where desired) are preferred. Soil resistant treatment must be included. Study tables of four readers are preferred. Tabletop partitions may be placed on study carrels or counters. Moveable furniture and equipment must be equipped with carpet casters. Chairs should have sled bases. Carrels may be single or double-sided. Staff task chairs must be ergonomic in design. Actual samples of all furnishings should be provided from which to select. Present and future furniture must be identified on all furniture and equipment layout drawings, starting at the schematic design phase and continuing through working drawings.

Millwork

Custom built-ins and/or free standing millwork will be included in the construction bid. Circulation / reference and study / tutor / computer counters and possibly carrels could be built in. Standard furniture and furnishings may be used, particularly when future additions might be made as in shelving, circulation/information counters, OPAC/CD-ROM stations, workroom workstations, the staff work island, computer counters, and carrels.

Counter fronts, outside corners, walls under computer carrels and OPACs, etc., will take a beating and must be protected with caps, plates, moldings, carpet, acrylic, etc. Counter tops receive a great deal of abrasion and should be surfaced with an extremely durable, washable material such as granite, high pressure laminate, or one that can be refinished or replaced inexpensively. All sinks must have a backsplash of either tile or other water resistant material.

Storage closet shelving in the staff workroom and elsewhere will be adjustable. OPAC/CD-ROM printer shelves will be adjustable. Where possible, cabinetry should be standard size. A coat closet for staff will be provided. Padlockable, vented purse lockers (metal preferred) will also be provided for in staff area.

The computers will require strategically located stations in the public area and counters or desks in the staff service or work areas. These stations will be set at two levels (ADA standards). Review with Library staff the counter space for multipurpose workstations and peripheral devices. Each public computer station should be at least 4' in length, 32" deep and 27" keyboard height or ADA standard and capable of seating a minimum two users. Troughs or other devices to screen the computer wiring must be included. Kick plates are to be used under computers, counters, and carrels. Grommets and wells must be placed in all counter tops and carrels to accommodate wire management. The circulation, reference, and OPAC counters, computer room counters, etc., must have room for keyboards, monitors, servers, scanners, and printers. Use of flat screen monitors wherever possible will be considered and will save space.

Windows

Sun angles for the annual cycle must be carefully studied and compensated for with overhangs, screens, etc. Windows should be located if possible so as to be shaded from the sun. Wherever possible install windows that open with screens. Selected windows in all major public and staff areas should pivot or open to allow for ventilation in the event of mechanical failure. These windows may be equipped with a keyed lock (one key fits all) or other device to allow for staff control. The architect will recommend, if necessary and if desired, curtains, blinds, or other window coverings. These are to be included in the construction contract. Opening poles for high windows and coverings must be provided.

Selected windows providing an inviting view of the interior from street or sidewalk are desirable. Glass used should be of the non-glare and/or heat reflecting, tinted variety and be insulated. The meeting rooms need to have darkening capability.

Window location must not affect the layout and use of shelving, furniture, and equipment. Windows should not be located in areas where proper security cannot be provided. Caution should be exercised in the use of clerestory windows and skylights because of maintenance costs and the problem of sun control. Maintenance and replacement costs should be considered on all designs selected. Standard available sizes must be used when possible. Removable windows will facilitate cleaning. Interior windows should be located in the juvenile area, study / tutor / computer / homework room(s), staff workroom, staff lounge, and librarian's office.

Workstations, Special Purpose Units, and Support Area Electrical Appliances

The Library Building Committee will acquire the appropriate items (includes but not limited to computers, FAX, cash register, copy machine, automated online catalog system, telephones, printers, scanners, etc.) through a purchasing process. However, the architect and contractor will be responsible for the provision of necessary space, power, and related furniture. Purchase and installation of the refrigerator, microwave, etc., will be part of the construction contract. Purchase and/or installation of audio/visual equipment is to be considered for inclusion in construction contract.

The computers will be located in general public service areas, study / tutor, circulation / reference, and staff workrooms and offices. These will be placed so as to be visible to staff but located away from exterior windows and doors. All workstations, special purpose units, and electrical appliances, present and future, will be identified on all furniture and equipment layout drawings at the schematic design phase and through the construction documents phase.

The cash register will be placed at the circulation desk (preferably on a counter or wall behind the circulation desk) but secured either by placement or covering from public view. The computers and photocopy machine will be placed at their designated places. Photocopy machines must be located in acoustical alcoves or enclosures with room for sorting, storage, etc.

3.3.2. Structural Systems Considerations

The structure of the project will have to accommodate a mix of space and loading conditions. In doing so, the selected systems should integrate well with the architectural design and provide a lightweight, repetitive and economical solution to the program requirements.

Floor Loading Capacity

A building structural system with a minimum floor capacity of 150 pounds per square foot live load throughout the building is needed in order to accommodate standard library shelving floor loads. Areas designated for compact storage shelving will require a floor loading capacity of 250 pounds or more per square foot live-load, depending on the specific manufacturer. For compact shelving, a structural engineer's analysis is required to determine the exact floor loading requirements. To handle the considerable present and future collections of the library, 100% of the building will need a floor load capacity of a minimum of 150 lbs per square foot.

Bay Sizes

Libraries, to be organized efficiently and to permit inevitable rearrangements, are designed with column placement and the resulting bay size as an important consideration. Dimensions should be based on the 36 inch wide (sometimes called length) library shelf allowing several additional inches per range for uprights

and end panels. A double faced section of approximately 12" deep shelves is approximately 24" deep. Aisles in public areas should be ADA minimum clear 36" (although some codes may require 42 inches). An important early consideration in the public area is the establishment of the best bay module. Bays of 25 ft. to 33 ft. represent a desirable range to consider as bays in this range can more efficiently accommodate multiple library shelving ranges.

Seismic Considerations

All appropriate seismic requirements must be conformed to by the architect and contractor. Lighting fixtures must meet the standards. These fixtures and lenses must be adequately anchored and secured. Floor anchors, top ties, sway braces, and additional spreaders in the frame and gussets are required as per local codes. All single-faced wall units must be wall anchored. For earthquake Zone 4 (California), single-faced shelving must be floor anchored as well. All shelving must meet current local, state, and federal codes.

3.3.3. Mechanical Systems Considerations

Adequate heating and air conditioning with proper control is essential, with particular attention to energy efficient quiet operation. Excessive heat is a significant problem in summer. Controls, vent locations and any other mechanical elements must not conflict with the complete flexibility of arrangement of shelving, furniture, or equipment. Possible separate heating, etc., system for the Community Meeting Room should be considered.

The mechanical system must be adjustable by authorized staff. It must be efficient, yet effective so that operating costs are kept as low as possible.

The mechanical system and water heaters should not be located on the roof of the library building unless design constraints require it. If necessary, they should be placed over reading spaces, not over collections or staff spaces, and definitely not over exhibit areas.

The system should be designed to maintain the temperature with a variance of no more than three degrees. Plan to maintain a relative humidity of fifty percent (50%) plus or minus 5%. Consider the following in designing the HVAC system:

- Provide a system with low life-cycle costs in terms of operation, maintenance, and economy cycles;
- Provide for the use of sensor thermostats;
- Provide separate control zones for each room.

Design the system with enough redundancy so that a breakdown of one portion will not impair continuous air flow to the public and staff. In case of air conditioning failure, design the system for outside ventilation using air handling units or operable windows. All filters should be located so that they are easily accessible for cleaning and replacement. Particular care should be taken that sufficient air conditioning thermostatic controls are provided and secured against tampering. Locked covers for the thermostats are acceptable, provided they are accessible to staff. Interior thermostats should not be located where wall shelving is to be installed. Consider utilizing ceiling or exhaust fans in the staff workrooms, the staff room, and meeting and conference rooms, to support economical air circulation. Placement of all thermostats should be done in conjunction with the shelving and furniture layout.

There should be a filter and humidity control system. Adequate humidity with proper control may be necessary. Summer humidity must not require boiler operation. All air introduced into the building must be filtered. No license shall be required to operate any of the mechanical equipment in the building.

Adequate ventilation must be provided to all seating and lounge areas including a thorough mixing of air in rooms, no stratification of air.

Kitchen cooking area and restrooms require an exhaust fan. All hardware and mechanical items specified and maintenance service should be available locally. The equipment room housing the heating and cooling equipment should be accessible for outside maintenance repairs. Outside versus. roof placement of systems is preferred.

Air Filtration. Library books, journals, and newspapers housed in the building create paper pulp dust. It is imperative that the HVAC system have air cleaners and filters that can effectively deal with the dust while maintaining the temperature and humidity requirements as specified.

Building Automation System (BAS). A building automation system should be considered. The system should be comprised of a programmable central monitoring control and supervisory system operated by staff, which incorporates and integrates various features. It should be accessible via a modem to support maintenance, programming, and reporting requirements.

Mechanical Room and equipment must have adequate ventilation and insulation, adequate clearance for maintenance and ample access to all equipment. The room should also have adequate access to outside for removal of heavy equipment, sound insulation in equipment, and vibration damping especially for any attic mounted equipment. All custodial work area must be separate from this room. Inside or outside installation of equipment is suggested rather than rooftop installation.

Plumbing

Design and specification of these systems must ensure that the library will not be susceptible to future water problems or damage. Draining systems must be adequately sized and one-way valves incorporated to prevent backup. There must be no water or drain lines running over major book storage areas. Outside faucets must be vandal proof. Adequate floor drains must be installed in the custodial and restroom areas.

3.3.4. Electrical Systems Considerations

The Bruggemeyer Memorial Library should be a fully automated library providing the functions of circulation, Online Public Access Catalogs (OPACs), and public multimedia and reference computers. Library service and work equipment will require a plethora of communication, power, and data support receptacles. Accommodations requiring flexible placement of outlets will include:

- Local Area (LAN) and Wide Area networks (WAN);
- Personal computing, electronic mail, and word processing systems;
- Monitors for computers and other staff functions
- Internet and World Wide Web (WWW) access multimedia computers;
- Computers with access to commercial databases, both in-house and remote;
- Microfilm reader-printers;
- Task lighting;

- Photocopying and telefacsimile machines;
- Telephones;
- Telephone key system;
- Self-checkout stations;
- Book theft detection system;
- Other devices.

In addition to electrical power, the use of automated systems necessitates extensive networking cable links between VDTs, any central processing units (CPUs), optical character recognition readers (OCR), computer printers, and other terminals and computers located throughout the building, or miles away.

Electrical System/Wire Management/Telephone/Intercom

There will be adequate electrical service provided for both present and future rearrangement and addition of computer equipment, telecommunication technology, and audio/visual equipment. If grids are used in the floor, they must be evenly spaced runs of conduit and floor outlets in public areas as well as work areas thus creating a grid for complete flexibility. All grid floor wiring should be in floor and flush. All floor outlets are to be flush mounted, capped, and covered with matching floor covering. All wiring is to be reviewed and coordinated by the Library's Information Systems staff and the City's Information Systems Department.

The following provisions will be made:

- Sufficient voltage and outlets for computer, terminal, modems, etc.
- Minimum fourplex outlet for each station and phone line, data cables
- Dedicated lines installed and placed where needed
- Clean power free of surges or spiking
- Transformer and other regulatory devices will be needed
- Consider use of protection at circuit breaker box

Conduits to all of these points, plus study / tutor / computer / homework room(s), staff workroom, etc. will be required, using dedicated electric and data cabling. Number and locations will be designated in design development. Audio/visual wiring and installation should be considered and if desired, included in construction contract. Under-carpet or raised carpeted floor sections for wiring system of telephones, computers, and electrical service is highly advised. Particular attention should be given to the weight of shelving, furnishings, etc. if raised-floor panels are used. Conduit must be properly anchored or isolated to avoid carrying mechanical system vibration.

Great care should be given to layout of wall and floor outlets so there is no interference with shelving. All wall electrical outlets must have juvenile safety caps and be vandal proof. Adequate outlets in either floor, wall, or under-counter must be easy to use and reach.

The electrical system should be capable of providing 220 volt service for heavy equipment in specified locations. Height of outlets must be at ADA standard. All carrels and counters used for computer work will be "wet". The entire building is to be "cable" ready. Fiber optics will be considered. Outlets will be needed for cash registers, copy machines, refrigerator, microwave oven, FAX, computers, and clocks. All outlets must be three pronged.

The telephone and possible intercom systems will require adequate conduit for use of a combined system within the building, serving all staff and public service points and future needs. Dedicated lines must be installed for FAX, OPACs, Internet, and LAN / WAN services.

Telephone jacks should be placed in the Community Meeting room, study / tutor / computer / homework room(s), staff lounge, staff workroom, circulation desk, information and/or reference counter(s), and other public areas for plugging phones in when needed. Cordless phones will be reviewed. Each service desk is to be wired for outside telephone connection.

The telephone system should have the capability to page staff in all areas of the building. An intercom system may be needed for safety announcements to the public. Direct communication between the workroom and the public service counters is essential.

The central answering point for the library will be at the circulation/information counter. A phone answering device that gives the hours the library is open and takes messages will be located here or in the staff workroom. The FAX machine should be at the circulation/information counter. A pay phone for public use should be installed in or near (in a well-lighted area) the building and be available for after-hours calls when the meeting room is in use. More discussion is required by the Library Building Committee (LBC) with appropriate communication consultants to determine the best internal telephone system. LBC may purchase telephones or they may be in the construction budget.

Cabling For Sound, Data Access, and Power

The absence of full-height partitioning in a modern library facility will prevent conventional vertical wall power and communications distribution from providing adequate serve to much of the open floor interior space. Conduit should run throughout the library to accommodate voice, data, and electrical hookups. These outlets should be placed throughout the library near study areas, in carrels, and all seating so that people will be able to use their laptop computers, their audio earphones, and other media and information technology devices, including electronic books, in the library without having to use a special workstation. This capability may not all be available at opening, but the infrastructure should be put in place so that as capabilities become available, the library can respond without great cost. Some areas will also be cabled for video conferencing, satellite up and down linking, and cable up and down linking. These are in the functional area descriptions.

A uniform under-floor distribution system is recommended with a raceway configuration dimensionally compatible with the overall approach to interior space planning (i.e., stack configurations and seating/workstation patterns). This system, combined with the provision of "wet" columns, will allow a suitable degree of flexibility over time, with relatively moderate utility renovation cost associated with adjustments to library occupancy patterns. High quality data and image communications will in the future be very much dependent upon the nature of the distribution system within the Library.

A location on the roof of the library facility, or if technically more appropriate on an adjacent structure, should be assumed for the installation of a future satellite dish antenna. This communications capability would then permit teleconference linkages to national and international networks as they evolve.

Voice, data, and satellite drops should be provided in each group study room, the Community Meeting Room, and the children's story area. These drops should be home-run to the main telecommunications room. The conduit for the satellite dish should home-run to the telecommunications room.

Powered Furniture Panels

Consider the purchase of furnishings and office systems that incorporate power panels on concealed raceways built in, through which power, data, and communications cables can be run.

Lighting and Interior Illumination

Special attention must be paid to lighting in the library environment. The library will be open all seasons, day and night. Glare from natural light should be checked to assure it does not blind staff at service desks or the public as they move around in the building. If skylights or clerestories are part of the design, a computer model of the angle of the sun as the seasons change should be provided to clarify the impact of bright sunlight on areas affected. Task lighting should be provided for reading tables and carrels. The multipurpose and group study rooms should be equipped with light dimming controls.

The lighting system for the building must be controlled centrally. The system must have a control panel which can be set by authorized staff to turn lights on or off by zones according to the time of day or night. The zone control for the lights should have a manual override capability. The control panel should be located near the Circulation Desk, but not visible to the public. A small closet near the Circulation Desk for the lighting control panel, the security system control panel, and the fire protection alert panel is desirable. The security and fire control panels have both visible and audible alerts that should be placed where they can be easily seen by staff at the Circulation Desk. It is important to have all building systems panels and alerts in the same area so staff are not wandering all over the building to carry out various building-related functions. Provide a duplicate lighting control and security system arming station near the staff entrance.

A variety of lighting conditions will occur with the new Library. In those areas of the Library where the interchange of space usage is contemplated over time, consideration should be given to a uniform lighting solution. It may, however, be cost effective and environmentally desirable to modulate illumination levels where appropriate.

Lighting fixtures in the library should be of a type and arrangement so that requested light levels will be achieved regardless of shelving and/or seating configurations. Variable lighting control will be required within selective areas of the Library in response to new technologies involving image viewing, computer screen illumination and video displays.

Major considerations in fixture selection should be keeping the number of different types of fixtures to a minimum and the ease of retubing. A special concern where overhead fluorescent lighting is utilized will be to avoid high glare conditions. The use of prismatic lenses with a minimum lateral light distribution pattern should be considered.

The general lighting pattern and switching should be separate from the night lighting and emergency lighting system. Night lighting should illuminate the building at all times when the building is closed to the public. The night lighting system should also provide for safe staff egress. An emergency lighting system is to be provided in all areas of the building, particularly in exit areas as required by area building codes. Recharging battery powered emergency lights must be installed in each workroom area.

An optional approach to illumination should be given consideration for portions of the new Library. Where there are open office and patron seating areas, an alternative to a high level of general overhead lighting may be, where appropriate, a task-ambient lighting system. This concept involves a lower overall room foot-candle level, (up to 35% less), with work surface illumination enhanced by individual light fixtures. The task-ambient lighting system can often provide a higher quality of non-glare illumination with the potential for savings in energy costs.

Access to natural light from interior spaces is attractive in a number of ways, and should serve as a supplement to the building's lighting systems. The treatment of glass on exterior wall surfaces must be given careful consideration with the impact of perimeter glass upon the interior spaces and functions thoroughly evaluated. Excessive amounts of direct sunlight can cause undesired glare for study and work activities. Also the concentration of the ultraviolet spectrum in natural light can cause the deterioration of print material and book bindings.

Light is of major importance. There must be a carefully planned combination of controlled natural and artificial lighting with no glare at table top or reading level. Good, uniform lighting is required. Seismic standards must be met. Fixtures and lenses must be adequately anchored and secured.

A common mistake in design is to base the lighting layout on the shelving and furniture layout. The latter will change in many ways through the years. The lighting design should accommodate this without moving or adding fixtures. The placement and relocation of high, 84" - 90" book stacks should be accommodated by the lighting plan. Attention must be given to the light on lower shelves and "shadowing" created by the placement of these tall shelving units. Possible lighting on stacks should be considered as well as task lighting on tables. Design of ceiling areas and fixtures used should prevent heat buildup problems, particularly in smaller, enclosed areas.

The architect and required illumination engineer must work very closely with the Library Building Committee to provide high quality lighting of an acceptable level throughout the library without glare or shadowing

Interior lights should be restricted to fluorescent fixtures using white long-life tubes. Incandescent fixtures should be restricted to staff lounge area for residential atmosphere, closets, and other limited uses. Special effect lighting and fixtures should be kept to a minimum. The variety and types of tubes and bulbs needed must be kept as few in number as possible to facilitate stocking and replacement. Parabolic fixtures have worked well in libraries.

Lighting levels in the open public areas should be of such a type and so arranged that the required light level can be achieved regardless of the arrangement of shelving or seating.

It is necessary that replacements for all tubes, bulbs, lighting fixtures, and other lighting equipment be available locally. Bulb changing equipment must be provided. Ease and accessibility of replacing light bulbs is essential. There must be adequate clearance between down lens panels and shelving and other fixtures. Adequate storage space for tubes and bulbs must be provided.

No cylindrical or recessed heat producing lighting fixtures are to be used in any area where patrons or staff are working. Spotlight fixtures are not to be used in any area where patrons or staff are working. Spotlight fixtures are appropriate only for the high lighting of specific display areas.

Public area lighting is to have proper switching located behind circulation/information desk or other protected area. Circuit breakers must be used. The system installed must be properly labeled with permanent labels. The switches should control a sufficiently large area so that the building's lights may be turned off with speed and ease. Multiple tube fixtures in office, work, and conference areas shall be double switched to allow half or all of the tubes in each fixture to be turned on so that the light level can be varied. Individual rooms must have switched lighting and/or motion sensor lighting.

Special attention must be given to tasks performed on building perimeters to ensure that the location of the light source provides the designated level of illumination. Task lighting at tables, etc. may be needed.

Switch locations and fixtures selected will be reviewed by the *Library Building Committee* prior to final approval.

Special attention is to be given to lighting fixtures and lenses over computer screens so as not to cause glare. Also adequate lighting should be placed over the circulation desk for computer work and paper work.

Communication Systems

The need for dependable telecommunications in the new Bruggemeyer Memorial Library not only includes the normal voice telephone systems but extends to automated communications as well. A key element in communication support is the requirement for a telecommunications closet. This space is generally expected to fall into that space included in the twenty percent (20%) unassigned space ratio programmed for the facility. However, given its key role in achieving necessary functional operation of the facility, it is more specifically identified in the program:

- A telecommunications closet to contain cabling terminations, patch panels and multiplexing equipment for both voice and data purposes should be provided. The Telecommunications Room should be equipped with a back-up dedicated air conditioning unit so that the temperature of 70 degrees and a relative humidity of 40% to 60% can be maintained at all times.
- A penthouse, rooftop, or top floor communications room of no less than 50 square feet should be established to support rooftop microwave and/or satellite communications antennas in the future.

Only by recognizing the need to flexibly accommodate a significant amount of initial and future telecommunications cabling will the facility be able to support the numerous voice and data networks identified for potential implementation.

Telephone System: Confer with the City and Library staff in planning for the telephone and telecommunications system and the number of dedicated telephone lines that should be required. Consult with the library staff on the number of dedicated telephone lines required for patrons dialing the library via the computer from off-site locations. Confer with library staff regarding the placement of all instruments and the number of incoming and outgoing lines required. The library telephone system should be separate from the city telephone system and voice and data drops should be provided at all workstations. The library will be connected to the City's network for data communications. Pull strings should be provided in all conduits. See *Section 6 Area Forms* for further information on telecommunications requirements of individual spaces.

Public Telephone System. Consider stand-up, open-front public telephones with provision for use by the handicapped. There should be at least one telephone for the physically handicapped in the building. A complete empty conduit system, including drag lines within all conduits one inch or larger, should be provided from the point of service entrance to locations throughout the building, as prescribed by the library. This system should also include required pull boxes and strip cabinets. Telephone wiring, connections and instruments should be provided by one local vendor.

Public Address System. Consider a public address system with multiple zones of overhead paging. The public address system should be integrated with the telephone system so that it can be accessed from numerous locations in the building. The system should be equipped with at least four zones: public area, staff area, Community Meeting Room, and all-call. The paging system may be addressed through

microphones or through the telephone system. Locate the public address controls at the Circulation Desk. Provide paging volume controls in the Multipurpose Room. Control the sound level of the paging system by correct spacing of the speakers. Closer placement of speakers should result in a less disruptive paging system because the volume can be kept lower. Provide for the ability to utilize audiocassettes with the system. The Multipurpose Meeting Room should have a separate public address system for meetings with both microphone and line-in jacks provided in convenient locations. Consider the use of wireless microphones for the Multipurpose Room and Classrooms systems.

Fire Protection - Sprinkler System - and Life Safety

Library facilities present significant life-safety and fire protection problems in light of their high volume of usage and the large combustible load of their holdings. It is recommended that a water fire suppression (sprinkler) system serve as the basic approach to fire protection in the Library. While water damage is of critical concern within a library facility, it has been found that the impact of such damage can be reasonably mitigated through rapid action by local fire department personnel if prior planning and coordination has been initiated.

Consider a sprinkler system in the library that is a pre-action system with an on/off thermostat; the sprinkler turns off when the fire is out, localized, and have copper versus steel piping to prevent staining. Use of a pre-action fire protection system is highly recommended and required for the Telecommunications Room.

A zoned, individually coded fire alarm system, with separate and distinct codes for smoke detection and sprinkler water flow, should be investigated. The system should include, but not be limited to, the following:

- Fire alarm control panel;
- Remote annunciation panel;
- Manual fire alarm stations;
- Area smoke detectors;
- Duct smoke detectors;
- Heat detectors;
- Sprinkler water flow switch alarm;
- Alarm bells;
- Visual alarm lights;
- Central station alarm, supervisory and trouble connection control;
- Air handling systems shutdown control;
- Elevator recall control (if an elevator is part of the building);
- Electromagnetic door holders and release control;
- Sprinkler valve tamper switch supervision;
- Emergency generator supervision;
- Fire pump supervision;
- Manual code switch; and
- Battery backup.

Signal termination panels for this system should be provided near the Circulation Counter.

Security Systems

The design solution should pay attention to the reduction of vandalism and provision of a high level of security for persons and property at all times. An alarm system with a separate system for the Community Meeting Room must be included in the construction contract.

Provide an intrusion security system to detect unauthorized entry when the library is closed as the library will house valuable collections of books and documents, works of art, considerable electronic equipment, office machines and vending machines. Provide for smoke and heat detectors to detect a fire at its inception and provide a local warning. Locate the system controls out of reach of children. Equip all emergency exits with an audible alarm and visual alert at the Circulation Desk. Provide dead bolts for all exterior doors. Provide removable core locks for all doors. Consider an electronic card reader system for the staff entrance.

The security systems should be designed so that it is possible to operate the Community Meeting Room with access to the adjacent restrooms when the library is closed. Roll-down gates or some other solution should be provided to prevent entrance to the library from the Community Meeting Room and restroom area when the Library is closed.

Cameras may be needed to monitor around the Reference Collection, the government documents collection, fiction Collection, the Nonfiction Collection, the International Room, the Young Adult area, the Quiet Area, the magazine area and the AV areas.

Library Materials Security System. A library materials security system is utilized. The building design should provide for the reinstallation of the library materials security system to detect and deter the unauthorized removal of library materials from the library. The system calls for the placement of special targets in library books and other materials. When materials with these exposed targets are carried out of the library by a patron exiting through a detection aisle, an alarm sounds alerting the library staff and/or the security guard at or near the Circulation Counter. Before the design of the entrance and exit and circulation counter area is finalized, extensive discussions with the vendor and library staff *must* be held.

Make sure that computer networks at the Circulation Desk and elsewhere are not interfered with by the security system.

The Bruggemeyer Memorial Library uses the 3M Library Materials Security System. The gates for this must be located a minimum of eight to ten feet from computers to prevent interference. In addition, special care must be taken in the design of the Circulation Counter to eliminate interference from the sensitizer/desensitizer equipment.

Building Security System. A security control panel should be provided in the Circulation work area that provides both system status and status for each exterior door. Security system arming stations should be provided near the loading dock door, staff entrance, and main entrance. A separate zone and arming station should be provided for the Community Meeting Room.

Exterior Door Security System. An electronic exterior door security system capable of locking all exterior doors of the building by means of a magnetic locking device should be considered and specified with signal termination panels located in the Circulation Workroom if specified.

Locks, Keying Systems. A building keying and/or key card access schedule that is as simple as possible should be prepared by the architect and reviewed by the Library Building Committee. A system should be based on staff need for access to the building and interior areas to perform their respective duties. The need for a large number of keys and constant access to a key case must be avoided. Zoned master and

grand master keys should be used. Some keys may be given to police and fire departments. All storage closets and cash drawers in the Circulation and Information counters are to be lockable.

A key card access system for the building is preferable to reduce the need for keys and reduce staff hours needed to maintain the system.

Clocks

Electric clocks should be provided throughout the building and be visible in every major public and staff area. Clock location should be provided in workroom, staff room, meeting room, and in general public areas as final plan determines necessary for easy visibility. They should be controlled by a master clock controller from which time can be changed and set as needed. The controller must be located near or in the Circulation staff area, in the same closet as the light controls, and be accessible to appropriate staff for changing the time. Clocks selected should be highly legible and easily set and maintained. The clock allowance should be provided in the general contract and it is recommended that the clocks be specified prior to construction bids.

BRUGGEMEYER MEMORIAL LIBRARY EXPANSION AND RENOVATION

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Section 4. Spatial Relationships and Functional Areas

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4. SPATIAL RELATIONSHIPS AND FUNCTIONAL AREAS

The spatial organization of the Library is one of the most significant physical determinants of its successful operation. Library users must be provided convenient access to services without undue movement throughout the Library. Likewise, library materials should be easily accessed, and staff should be able to move themselves and materials throughout the building in a logical and efficient manner. It is also essential to an efficient library operation that individual functional components be located in close proximity to one another where work flow or direct communication requires such a physical relationship.

4.1. Areas of the Bruggemeyer Memorial Library

The building program for the expansion and renovation of the Bruggemeyer Memorial Library identifies 14 major units in the library as well as building support and systems needed for the building to serve the public. These major units of space are identified in *Table 4.1* below; each area within a unit is identified. Each "unit" has been assigned a one to two digit number for reference purposes and each "area" has been assigned a three or four digit number which is called the "Area Data Form Number" (ADF Number) in this document. These numbers are for reference purposes only and are intended to assist individuals when reading the program or working with it. They are used throughout the document to refer to specific spaces and clusters of spaces.

4.2. Access Zones

Another guide to assist in spatial organization in libraries is the establishment of access "zones" within the library facility that define groupings of functional components relative to their accessibility to library users and staff. For the expanded facility, four access zones are conceptually defined to guide the layout of space, functions, and security systems.

Highest Access Zone: This zone is essentially the space located in the Entrance Lobby (*ADF101*) to the Library. It is the one place in the library that the public travels through before passing through the library's security system and into the library itself. This space will be accessible only when the library is open.

Regular Access Zone: The majority of library spaces – public service areas, seating areas, open collections, group study rooms, etc., are located in the regular access zone area. The library materials security system is one of the elements that separates the Highest Access Zone from the Regular Access Zone. Users must check out their library materials before leaving the Library's Regular Access Zone or the library materials security system will alarm.

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Table 4-1 List of Areas in the Bruggemeyer Memorial Library

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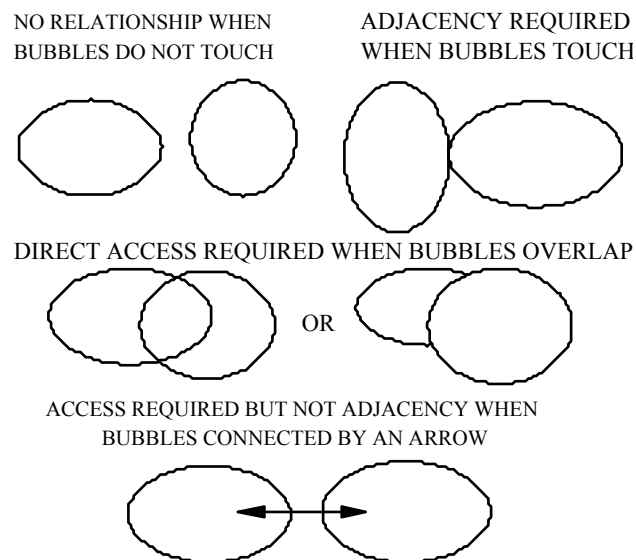
Limited Access Zone: Areas in this zone are generally not accessible to the public unless an event, program, or other activity is taking place within the space to which the public is invited or for which the public has an appointment or reservation. These spaces may have special hours when they are accessible to the public. Areas in this zone are primarily the programming rooms and classrooms.

Staff Access Zone: Included in this group are the administrative and staff work areas of the Library. Access to this space is controlled and supervised by library staff. The public is not generally allowed in these spaces without staff approval or an appointment.

4.3. Adjacencies and Spatial Organization

The bubble diagram presented in *Figure 4.1* below provides a brief legend on how to read the bubble diagrams used in portions of the following pages.

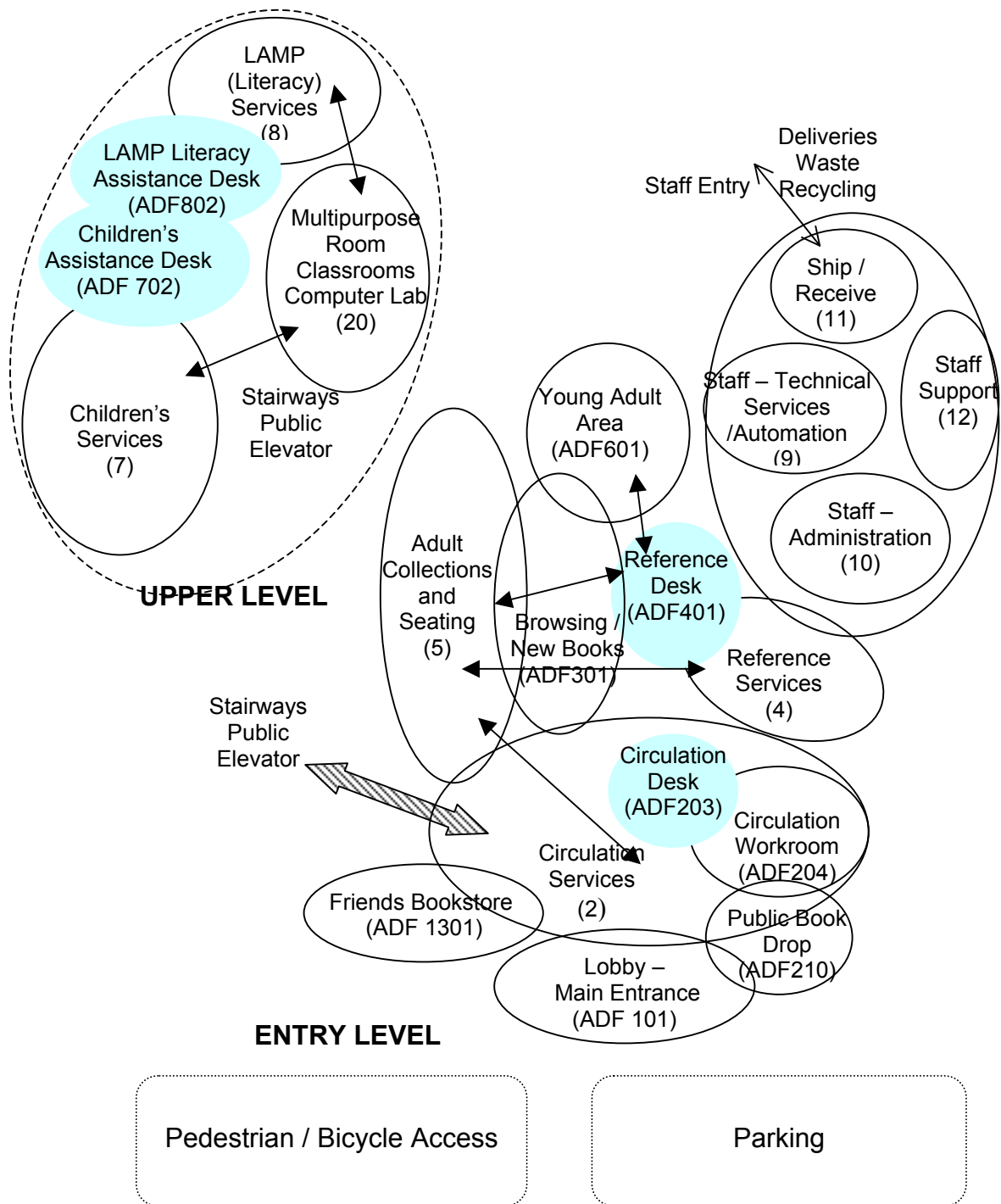
Figure 4-1. Bubble Diagram Legend



4.4. Spatial Relationships among Library Areas

The diagram in *Figure 4.2* on the following page represents the desired functional and spatial relationships among spaces in the expanded library. The functional adjacency requirements defined in *Figure 4.2* serve as a guide for both space planning and architectural design. Although the complete satisfaction of these requirements may be somewhat compromised by physical realities, their establishment can act as a benchmark against which to evaluate alternative approaches to the organization of space and functions within the expanded library facility and to balance functional requirements with design.

Figure 4-2. Bruggemeyer Memorial Library – Spatial Relationships



4.5. Functional Areas and Spatial Relationships - Selected Area Descriptions

The entrance to the library needs to be closest to most of the parking.

4.6. Entry Lobby (Outside Materials Security Gates (ADF 101))

The Library entrance is a very important part of the library. It provides a transition space from the outdoors and should establish the character of the library. It must be attractive and inviting. Traffic flow must be smooth; those entering and leaving the library and others moving from one section of the library to another pose a potential conflict in traffic patterns. The décor of the lobby should establish the library as a friendly community place, serving also as a transition to the quieter areas within the library. Visitors should be able to visually orient themselves to the library's major areas while passing through the entrance lobby. A Library directory including location of various services and hours of opening needs to be in the entry area. The directory needs to be in English, Chinese, Spanish and Vietnamese.

Library hours should be clearly listed on a sign. The library materials security system gates will be located between the Entrance Lobby and the Library itself. Provision should be made to allow the future addition of a City/Library community electronic directory information kiosk (with a touch screen) in the Lobby. The Entrance Lobby is a place where donors might be recognized with plaques of other appropriate designations.

The Entry Lobby will set the tone for the library services and programs offered within and should indicate to the user he or she will experience delightful, useful, and rewarding times in the library beyond the Lobby.

Pamphlet Distribution Alcove

This area will be a nook or alcove, accessible from the Entrance Lobby. It should be attractively designed to minimize clutter and "messiness." Bins should be designed to hold various sizes of announcement, newsletters, community papers, and bus schedules. The library's pamphlets, flyers, bookmarks, etc., as well as community oriented pamphlets will be displayed. Plexiglass holders on the walls and stackable spaces or bins for holding handouts and giveaways will be provided. Whatever design solution is found for this space, it must be able to handle a number of different pamphlets and be easily maintained and neat in appearance.

Sliding Glass Doors - Entry Doors

Automatic sliding glass doors open from the Entry Lobby to the Library Lobby. The doors must open electrically, but must be easily opened in case of electrical failure. The doors must be wide enough for wheelchair access.

Library Materials Return

Three slots for the return of library materials will be located on the wall in the Entry Lobby (one slot for Children's material, one for Audio-Visual materials, and one for everything else. The slots should empty into the Circulation Desk area. Each slot needs to have a depressible book bin under the chute. There needs to be a sign above these slots in English, Spanish, Chinese and Vietnamese telling people if they owe fines or need to pay for damages on the items, they need to bring them into the library.

4.7. Functional Areas: Public Services

Public service areas of the library will comprise the majority of space in the library building. Functional descriptions and spatial relationships among public service areas and functions are described below.

Library Lobby (inside library security gates) (ADF 201)

Immediately visible as one moves from the Entry Lobby, through the library materials security gates into the Library Lobby (ADF 20) should be a variety of services that will present a wide range of choices including:

- Circulation — returning and borrowing books and other materials;
- Browsing – new and popular books and media;
- Accessing – the online library catalog, electronic databases, and the Internet;
- Magazines - current and back issues;
- Browsing in the International Collections area;
- Directional information guiding one to the upper floor services – the children's areas, multipurpose rooms, classrooms, LAMP Literacy program, and the Computer Lab.

Inside the security gates, space should be open, inviting the visitor to explore all parts of the library.

Library Materials Security Gates

The Library will have a book / library materials theft detection system in place which is an existing system. The security gates at the Library Entrance should be attractive and unobtrusive, yet functional. Everyone exiting the library must go through the gates. There should be no space on either side of the gates that would enable people to bypass the central security system. The location of the library materials security gates, through which everyone must pass on entering and leaving the library is especially critical to staff at the Circulation Desk. Circulation Desk staff respond to alarms when users exit the gates with uncharged library materials.

Circulation Services

Circulation procedures continue to undergo significant changes due to the introduction of technology and automation of tasks. Modifications in operations may affect the layout of this area in the future. Libraries are placing more emphasis on the development of self-service circulation services. It is important that the design of the Circulation Desk and materials return chutes remain flexible enough to accommodate further change in the near future.

Circulation Desk staff are generally responsible for keeping an eye on what is happening in all parts of the library. In this two-story building, the Desk staff will need to be able to survey the entire public floor. Designs which maintain clear lines of sight from the Circulation Desk to the majority of the entry level of the library are very important. Installation of video security cameras or other security devices for surveillance with monitors located at the Circulation Desk may be needed if clear lines of sight cannot be developed.

Circulation Services Department is the most used and vital area of the library, and the Circulation Desk is most often the first point of contact between the user and library staff and thus provides a key first impression. People register for library cards, check out library materials, check in library materials and pay fines and fees at the Circulation Desk. It is the highest traffic area of the library. People entering the library pass in front of the Circulation Desk as they move to the main part of the library. A clear view of the main sections of the library should be available to those entering the library with a clear flow so that the public does not need to come to the Circulation Desk for directions to other areas of the library. Signage indicating the various sections of the library needs to be visible from this area. Exiting traffic needs to pass by the Circulation Desk and through two security gates which are part of the library's 3M Theft Detection System.

Self-Checkout Stations. Library visitors will be able to check out the items they wish to borrow on one of the self-checkout stations near the Circulation Desk.

Circulation needs to be near the elevator. The entrance to the elevator needs to be visible to staff at the Circulation Desk.

Reference Area (ADF 401, 402, 403)

This is a major service area of the library. The reference area is the informational center of the library. The librarians provide readers' advisory services, instruct people in the use of the online public access catalog (OPAC) and electronic resources, monitor usage of the Internet terminals near the *Reference Desk (ADF 401)* and help the public find answers to their questions. The Librarians help people in person, over the phone and via email to find answers to their questions. Much of this work is done at the Reference Desk.

The Reference Desk needs to be near the Reference and NonFiction collections. The Desk should be visible from the entrance and clear signage should lead people entering the Library to

the Reference Desk. Talking occurs here; the Reference Desk should not be near the adult quiet area. The staff at the Reference Desk need to have a clear view of the Adult and Young Adult areas of the library.

Online Public Access Catalog (OPACs)

The Library's catalog is accessed through terminals which replaced the card catalogs – i.e., they give the patron access to the collections by author, title, subject, keyword, and call number. Patrons can use the OPACs to place reserves, to find out about Library services – i.e., library hours, programs, services, etc. and to place suggestions. Patrons can also check their circulation record to find out what they have checked out, what items they have on reserve and what fines they may owe. Also on the system is a magazine index with full-text of some of the articles, a newspaper database with full-text of a number of newspapers and Gale Student Resource Center database. Each terminal needs a coin-operated printer or it needs to be networked to coin or card-operated printers. The copier vendor will continue to supply and maintain these printers.

Media Services (ADF 560)

These collections and services provide informational, educational, entertainment and cultural materials in a non-print format. This area must have maximum adaptability as formats may be added or disappear over the years. Space and equipment is available in this area for patrons to listen to or view materials in this collection.

This area needs to be close to the entrance to the library. It can be near the Young Adult area (ADF 601) as it can often be a noisy area. It should not be near the Adult Quiet Room (*ADF 511*).

Adult Collections and Seating

All ages use this area. Seating is provided for those using the Library's collections. Many use the seating for homework or relaxing.

Children's Area

Children's Reference

The Children's Reference area is the informational center of Children's Services. Staff perform reader's advisory work; instruct people in the use of the OPAC; monitor usage of the Internet terminals; help the public find answers to their questions. Staff help people in person, over the phone, and via email to find answers to their questions. Much of the work is done at the Children's Reference Desk. Staff also refer patrons to the main Reference Desk when the questions cannot be answered in the Children's area. The Children's Reference Assistance Desk (ADF 702) will be a joint desk shared with the LAMP Literacy program.

**BRUGGEMEYER MEMORIAL LIBRARY
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Section 5. Summary of Facility Space Requirements

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5. Summary of Facility Space Requirements

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BUILDING PROGRAM

6. Space Descriptions

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6. SPACE DESCRIPTIONS: AREA DATA FORMS

The following chapter provides a detailed description of all functional and defined spaces in the new library facility. It complements the previous chapter where each area and its relationship to other areas in the building is described. This detailed information for each area is listed in the following Area Data Forms. The forms describe the activities and requirements of each area listed in the table *Summary of Facility Space Requirements* listed in *Section 5*. The area data forms provide specific detail on the shelving, furniture and equipment, and note important functional relationships and unique conditions in each area of the building.

A list of the areas described with their Area Data Form (ADF) number, for ease of location and reference in the building program is on the next few pages. Each area is described on the two facing pages for ease of reference and location of information on particular aspects of each area. The Area Data Form (ADF) number is in the upper right hand corner of each facing page. Each space is briefly described in terms of desired characteristics including:

- A description of the functional activities anticipated to take place in the space;
- The occupancy, or anticipated number of staff and/or public typically using the space at any given point in time;
- A description of the relationships between assignable spaces in terms of adjacencies desired or prohibited;
- A preliminary listing of furniture and equipment, including collections;
- Remarks addressing special environmental and engineering needs not necessarily covered in *Section 3* of this building program;
- Other comments, including growth projections, as appropriate

Shelving height and number of units may be altered as long as total number of shelves and volume capacity remain. All shelving calculations are for single-faced units. However, **double-faced units are required** wherever feasible as space conservators — single-faced units on walls and double-faced units in center areas. A book support should accompany each shelf. Specific accessories to shelves for different purposes should be specified at the construction document phase to assure that the appropriate numbers and kinds of shelving accessories are ordered.

The seating total includes spaces for a person in a wheelchair; it does not include stand-up tables or lecterns which are reflected in occupancy, or seats at equipment and technology stations which are tabulated in those counts. When stacking chairs (and folding tables) are specified, adjacent storage space must be provided.

Some of the abbreviations and conventions used in the forms are listed below.

LEGEND:

S.F. or SF	Square Feet
H	Height
L.F. or LF	Linear Feet
D	Depth
SF	Single-faced shelving unit
DF	Double-faced shelving unit
W	Width

Some of the information in each form may duplicate information found elsewhere in this program. It is repeated here to provide one place in which to find most of the information about a particular area. The furniture and equipment listing for each space is not inclusive. It identifies the basic shelving, seating, computer, and other equipment needs required to outfit each space. The specific requirements for each piece in every space will be identified, modified, and specified during the design process.

6.1. *List of Area Data Forms (in Area Data Form Number Order)*

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6.2. Area Data Forms (by Area Data Form Number)

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**BRUGGEMEYER MEMORIAL LIBRARY
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Section 7. Preliminary Project Budget

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7. PRELIMINARY PROJECT BUDGET

The following is a preliminary outlay project budget for the Bruggemeyer Memorial Library Renovation and Expansion Project.

Construction	\$6,800,000
Renovation	\$2,000,000
Sitework	\$500,000
Soft Costs	\$4,000,000
TOTAL	\$13,300,000